FCC PART 90

TEST AND MEASUREMENT REPORT

For

SYM Technology, Inc.

234 E. Colorado Blvd., STE 410
Pasadena, CA 91101

FCC ID: W74-V248919

Report Type: Original Report	**Product Type:** Bi-Directional Amplifier

Test Engineer:	Lionel Lara
Report Number:	R12043013-90
Report Date:	2012-08-07
Reviewed By:	Victor Zhang EMC/RF Lead

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R12043013-90	Original Report	2012-08-06

1 GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

This test and measurement report was prepared on behalf of *SYM Technology, Inc.* and their product *FCC ID: W74-V248919*, model: *Vision24*, *o*r the "EUT" as referred to in this report. The EUT is a bi- directional amplifier with removable service cards operating in the PCS and SMR bands. The frequency bands are: 806-824/ 896-901/ 1850-1915 MHz for uplink and 851-869/ 935-940/ 1930-1995 MHz for downlink. Modulation types are iDEN, CDMA and LTE.

1.2 Mechanical Description

The EUT Approximate measurement is: 48 cm (L) x 29 cm (W) x 50 cm (H). Weight: 40823g.

The test data gathered are from typical production sample, serial number: R12043013 assigned by the manufacturer.

1.3 Objective

This type approval report is prepared on behalf of *SYM Technology, Inc.* in accordance with Part 90 of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for RF output power, modulation characteristic, occupied bandwidth, spurious emissions at antenna terminal, field strength of spurious radiation, frequency stability, Emission Mask, and conducted and radiated margin.

1.4 Related Submittal(s)/Grant(s)

No Related Submittals

1.5 Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 90 Private Land Mobile Radio Services

Applicable Standards: TIA/EIA-603-C

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

1.6 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the values ranging from +2.0 dB for Conducted Emissions tests and +4.0 dB for Radiated Emissions tests are the most accurate estimates pertaining to uncertainty of EMC measurements at BACL Corp.

Detailed instrumentation measurement uncertainties can be found in BACL Corp. report QAP-018.

1.7 Test Facility

The test site used by BACL Corp. to collect radiated and conducted emissions measurement data is located at its facility in Sunnyvale, California, USA.

The test site at BACL Corp. has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997, and Article 8 of the VCCI regulations on December 25, 1997. The test site also complies with the test methods and procedures set forth in CISPR 22:2008 §10.4 for measurements below 1 GHz and §10.6 for measurements above 1 GHz as well as ANSI C63.4-2003, ANSI C63.4-2009, TIA/EIA-603 & CISPR 24:2010.

The Federal Communications Commission and Voluntary Control Council for Interference have the reports on file and they are listed under FCC registration number: 90464 and VCCI Registration No.: A-0027. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL Corp. is an American Association for laboratory Accreditation (A2LA) accredited laboratory (Lab Code 3297-02). The current scope of accreditations can be found at http://www.a2la.org/scopepdf/3297-02.pdf?CFID=1132286&CFTOKEN=e42a3240dac3f6ba-6DE17DCB-1851-9E57-477422F667031258&jsessionid=8430d44f1f47cf2996124343c704b367816b

2 SYSTEM TEST CONFIGURATION

2.1 Justification

The EUT was configured for testing according to TIA/EIA-603-C.

The final qualification test was performed with the EUT operating at normal mode.

2.2 EUT Exercise Software

The software used was web based GUI via LAN Port (Http://192.168.2.1) provided by SYM Technology and was verified by BACL to comply with the standard requirements being tested against.

2.3 Equipment Modifications

No modifications were made to the EUT.

2.4 Local Support Equipment and Software List and Details

Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	0679	CB08585694

2.5 EUT Host Internal Configuration

Manufacturer	Description	Model	Serial Number
SYM Technology, Inc.	Vision Rectifier (Power Supply)	VS-RET	-
SYM Technology, Inc.	Vision Network Controller	VS-CTR	-
SYM Technology, Inc.	Vision Main Frame Enclosure	VS-MF	-
SYM Technology, Inc.	Vision 800/900MHz Digital Unit	V89DTU	-
SYM Technology, Inc.	Vision 800/900MHz RF Unit	V89RFM	-
SYM Technology, Inc.	Vision 800/900MHz 24dBm HPA	V2489HPA	-

2.6 Interface Ports and Cables

Cable Description	Length (m)	To	From
RF cable	<1	Signal Generator	Input/ EUT
RF cable	<1	Output/ EUT	Spectrum Analyzer

3 SUMMARY OF TEST RESULTS

FCC Rules	Description of Tests	Results
§2.1046, §90.635	RF Output Power	Compliant
§2.1047	Modulation Characteristics	N/A[1]
§2.1049	Occupied Bandwidth	Compliant
§2.1051, §90.691	Emission Mask	Compliant
§ 2.1051,§ 90.669	Spurious Emissions at Antenna Terminals	Compliant
§2.1053, §90.669	Field Strength of Spurious Radiation	Compliant
§2.1055	Frequency Stability	N/A[1]
§1.1310, §2.1091	RF Exposure	Compliant

Note[1]: Not applicable, the EUT is an amplifier; there is no oscillator circuit in the EUT, and there are no modulation characteristics.

4 FCC §2.1046 & §90.635 – RF OUTPUT POWER

4.1 Applicable Standard

According to FCC §2.1046, and §90.635, (a) The effective radiated power and antenna height for base stations may not exceed 1 kilowatt (30 dBw) and 304 m. (1,000 ft.) above average terrain (AAT), respectively, or the equivalent thereof as determined from the Table. These are maximum values, and applicants will be required to justify power levels and antenna heights requested, (b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

4.2 Test Procedure

Conducted:

The RF output of the transmitter was connected to the signal generator and the spectrum analyzer through sufficient attenuation.

4.3 Test Equipment List and Details

Manufacturers	Descriptions	Models	Serial Numbers	Calibration Dates
Agilent	Spectrum Analyzer	E4440A	MY44303352	2012-05-10
Agilent	Signal Generator	E4438C	MY45091309	2012-05-03

Statement of Traceability: BACL Corp. BACL Corp. attests that all calibrations have been performed according to A2LA requirements, traceable to the NIST.

4.4 Test Environmental Conditions

Temperature:	20 °C
Relative Humidity:	50 %
ATM Pressure:	101.2 kPa

The testing was performed by Lionel Lara on 2012-05-17 in RF Site.

4.5 Test Results

Please refer to the following tables.

Mode		Channel	Frequency (MHz)	Input Power (dBm)	Output Power (dBm)
iDEN	806-824 Uplink	Low	806.1	-58	24.08
		Middle	815	-59	24.31
		High	823.9	-57	24.56
	851-869 Downlink	Low	851.1	-58	24.06
		Middle	860	-59	24.74
		High	868.9	-59	24.06
	896-901 Uplink	Low	896.1	-59	24.05
		Middle	898.5	-59	24.20
		High	900.9	-59	24.24
	935-940 Downlink	Low	935.1	-58	24.72
		Middle	937.5	-59	24.02
		High	939.9	-59	24.13

5 FCC §2.1049 – OCCUPIED BANDWIDTH

5.1 Applicable Standard

Requirements: FCC §2.1049.

5.2 Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

According to the FCC 2-11-04/EAB/RF, Input and output signals were compared to verify that there was no any degradation to the signal due to amplification and conversion from the repeater using an RBW of 300 Hz or 1% of the emission bandwidth. Then the 26 dB & 99% bandwidth was recorded.

5.3 Test Equipment List and Details

Manufacturers	Descriptions	Models	Serial Numbers	Calibration Dates
Agilent	Spectrum Analyzer	E4440A	MY44303352	2012-05-10
Agilent	Signal Generator	E4438C	MY45091309	2012-05-03

***Statement of Traceability*:** BACL Corp. attests that all calibrations have been performed according to A2LA requirements, traceable to the NIST.

5.4 Test Environmental Conditions

Temperature:	20 °C
Relative Humidity:	52 %
ATM Pressure:	101.3kPa

The testing was performed by Lionel Lara on 2012-05-18 in RF Site.

5.5 Test Results

Please refer to the following tables.

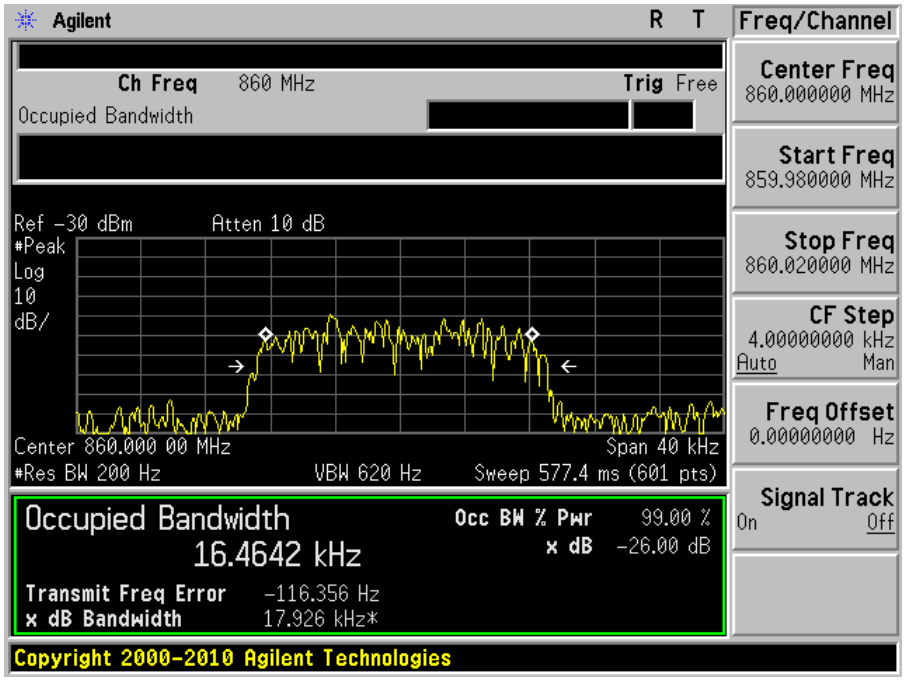
Mode		Channel	Frequency (MHz)	Emission Bandwidth Input (kHz)	Emission Bandwidth Output (kHz)
iDEN	806-824 Uplink	Middle	815	16.5824	15.8658
	851-869 Downlink	Middle	860	16.4642	16.7660
	896-901 Uplink	Middle	898.5	15.8775	16.1624
	935-940 Downlink	Middle	937.5	16.2722	16.4334

Please refer to the following plots:

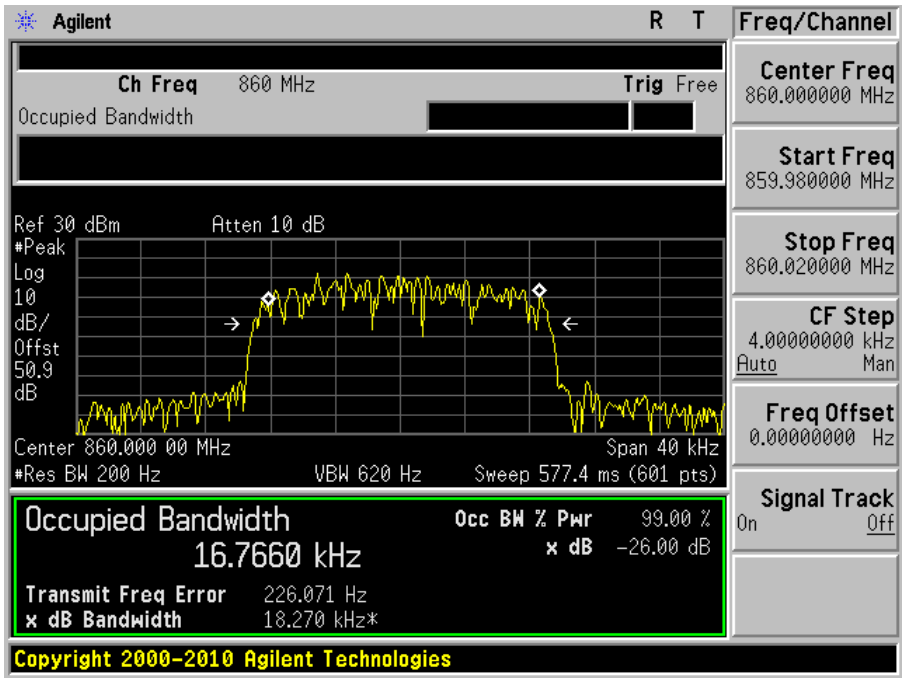
851-869 MHz Downlink

Middle Channel

Input



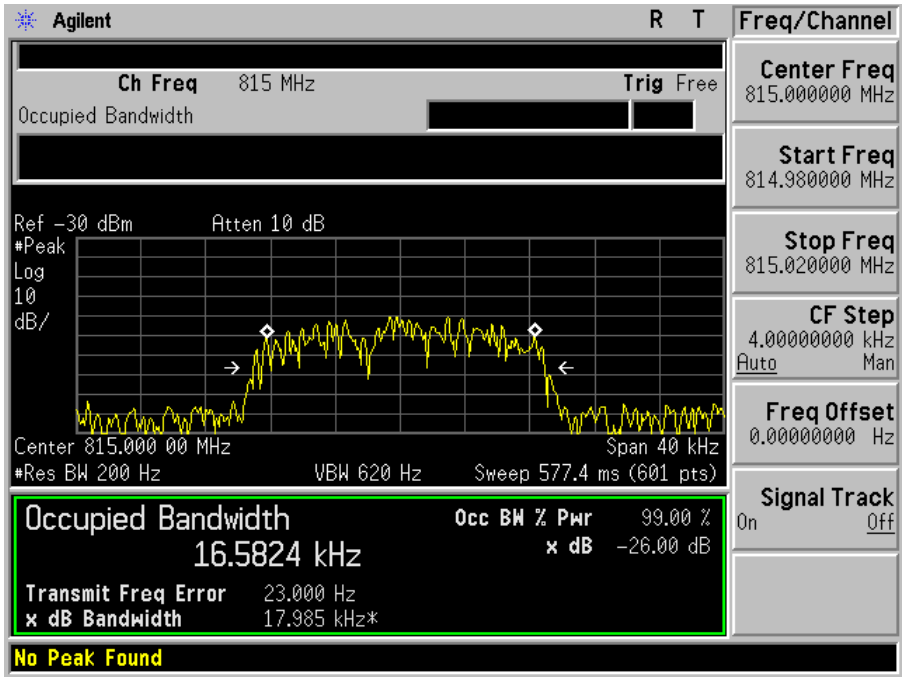
Output



806-824 MHz Uplink

Middle Channel

Input



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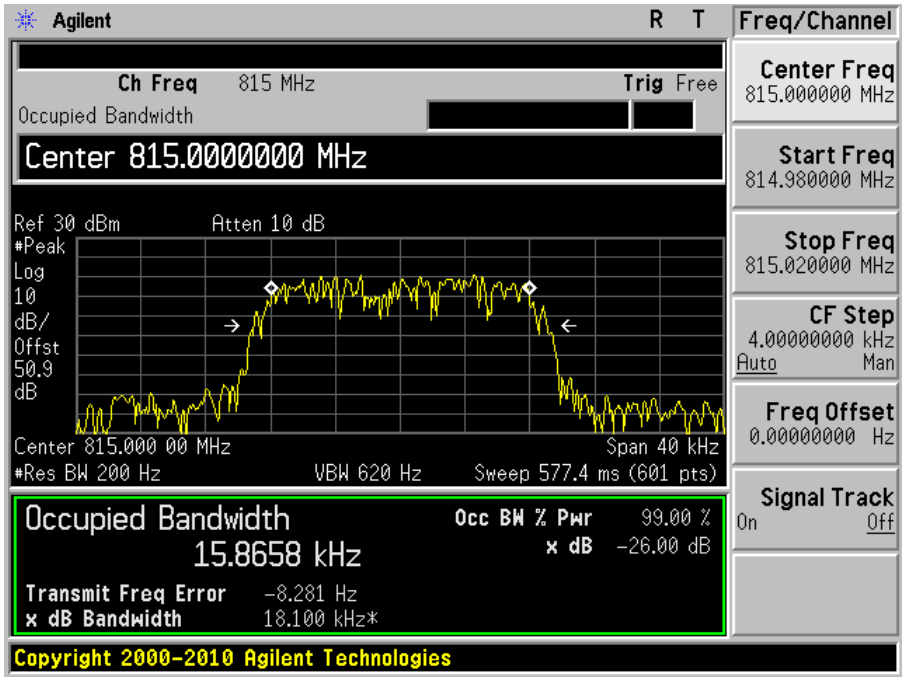
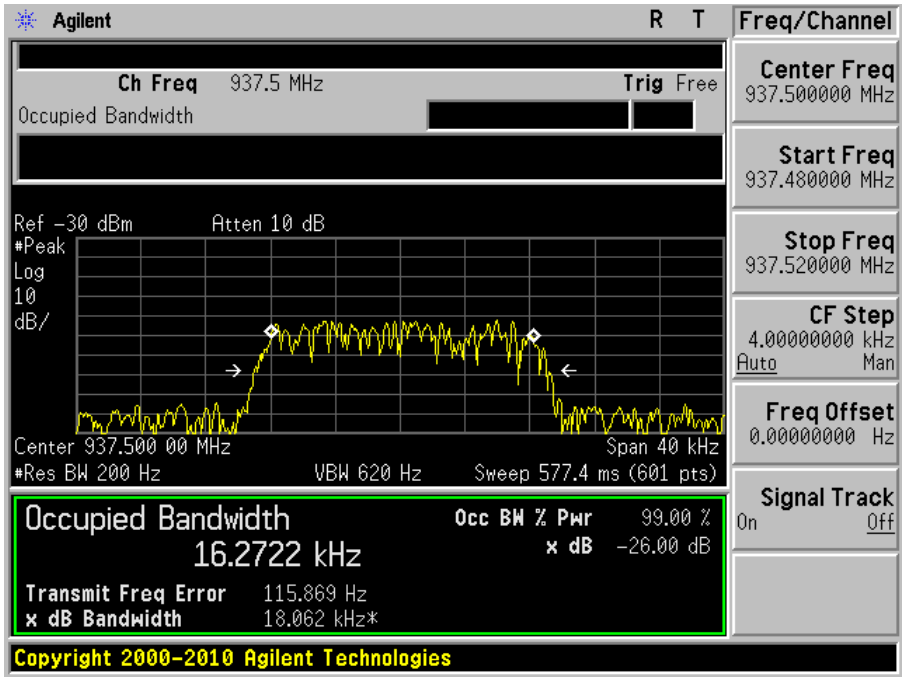


935-940 MHz Downlink

Middle Channel

Input



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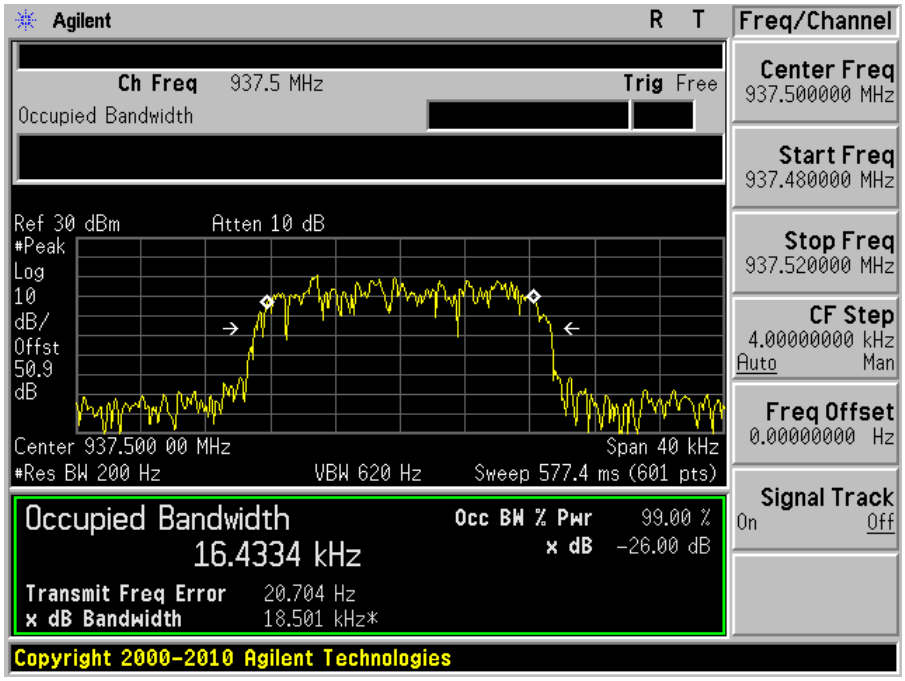
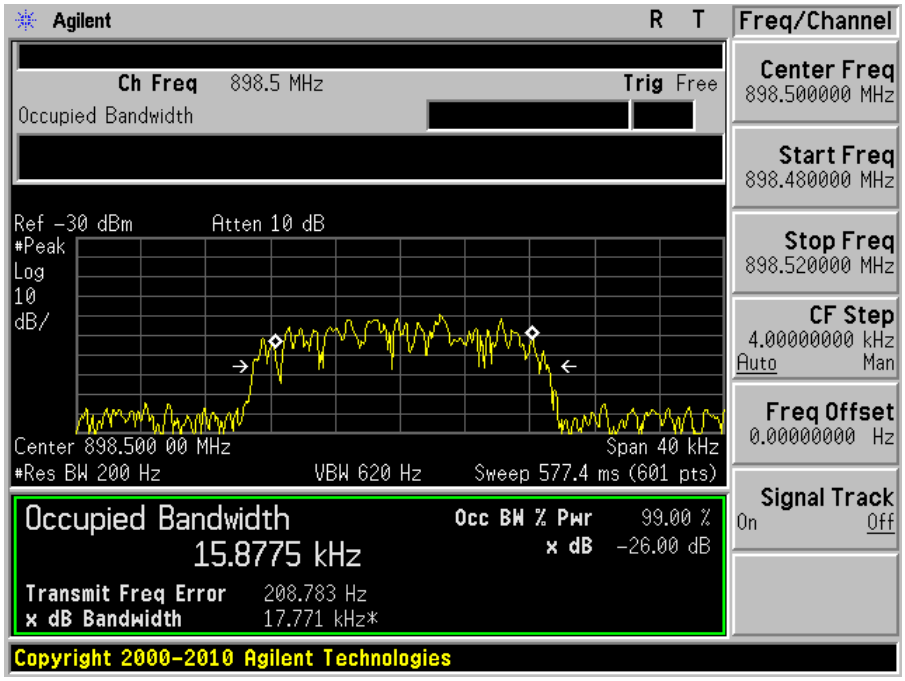


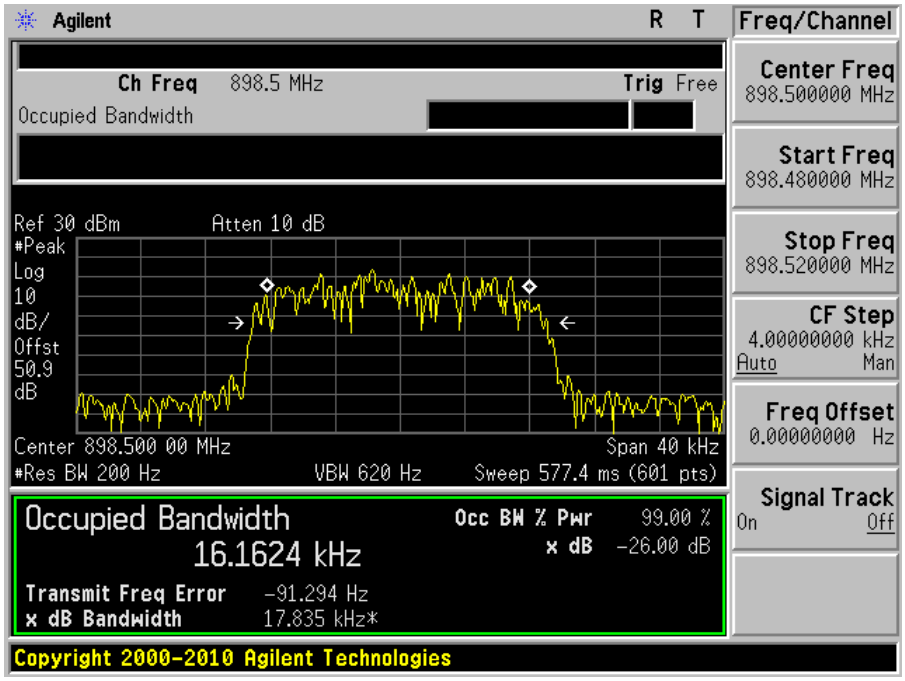
896-901 MHz Uplink

Middle Channel

Input



Output



6 FCC §2.1051 & §90.691 – EMISSION MASK

6.1 Applicable Standard

According to FCC §90.691: (a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

6.2 Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

6.3 Test Equipment List and Details

Manufacturers	Descriptions	Models	Serial Numbers	Calibration Dates
Agilent	Spectrum Analyzer	E4440A	MY44303352	2012-05-10
Agilent	Signal Generator	E4438C	MY45091309	2012-05-03

***Statement of Traceability*:** BACL Corp. attests that all calibrations have been performed according to A2LA requirements, traceable to the NIST.

6.4 Test Environmental Conditions

Temperature:	21°C
Relative Humidity:	50 %
ATM Pressure:	101.2kPa

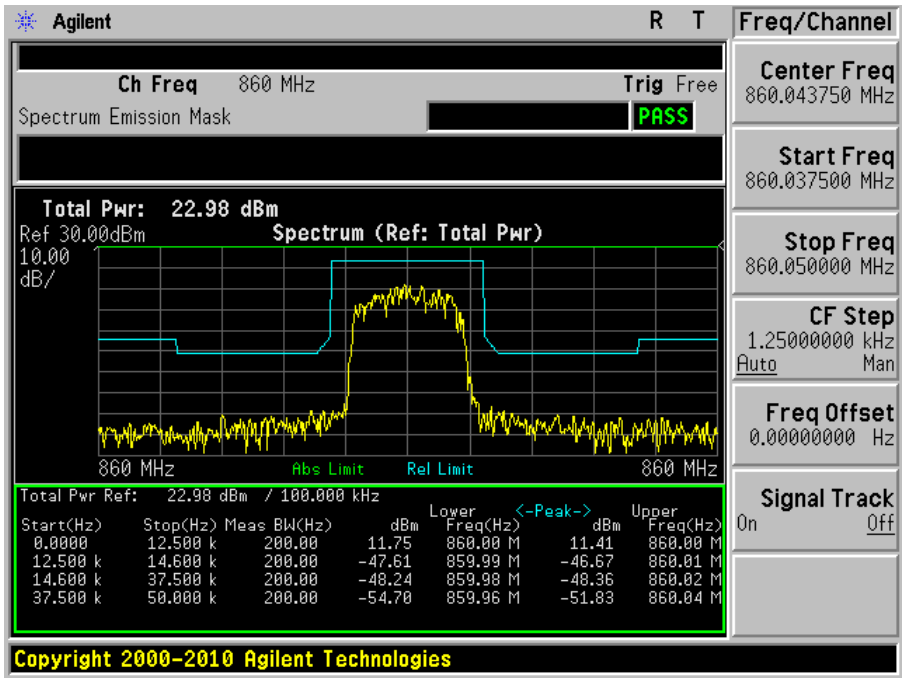
The testing was performed by Lionel Lara on 2012-05-22 in RF Site.

6.5 Test Results

Please refer to the following plots.

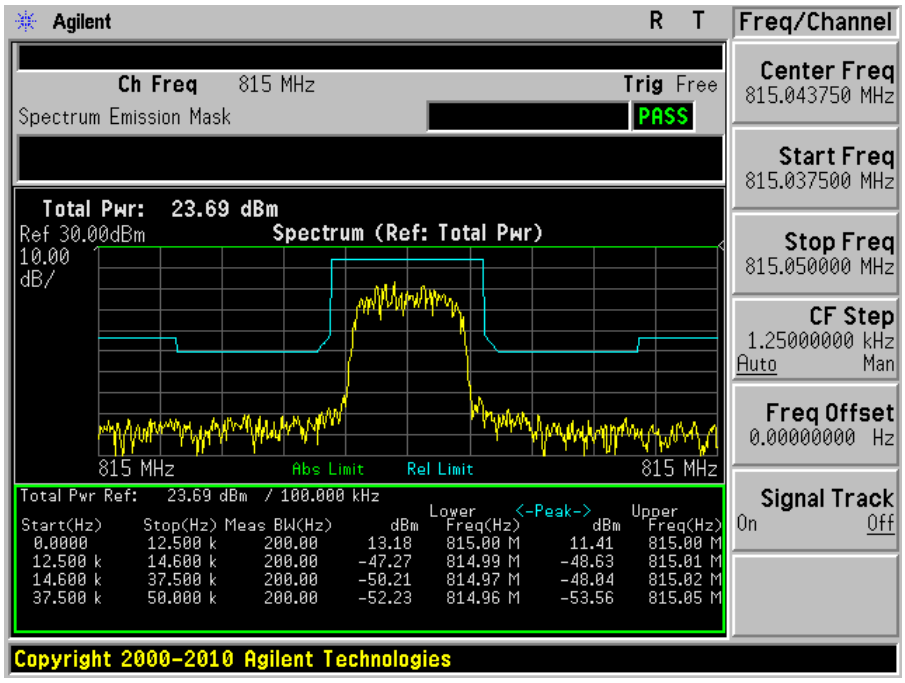
851-869 MHz Downlink

Middle Channel



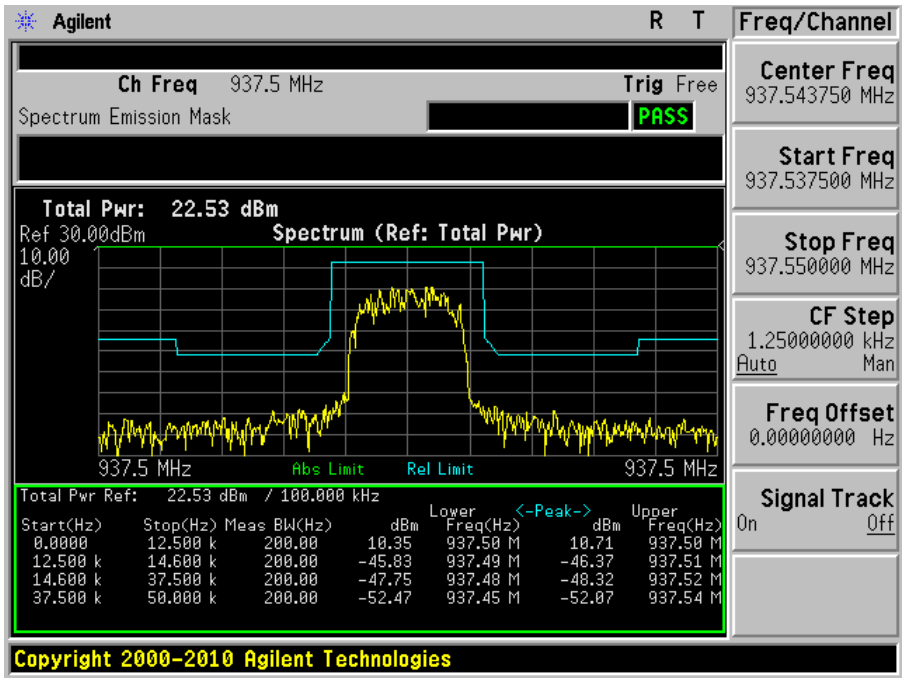
806-824 MHz Uplink

Middle Channel



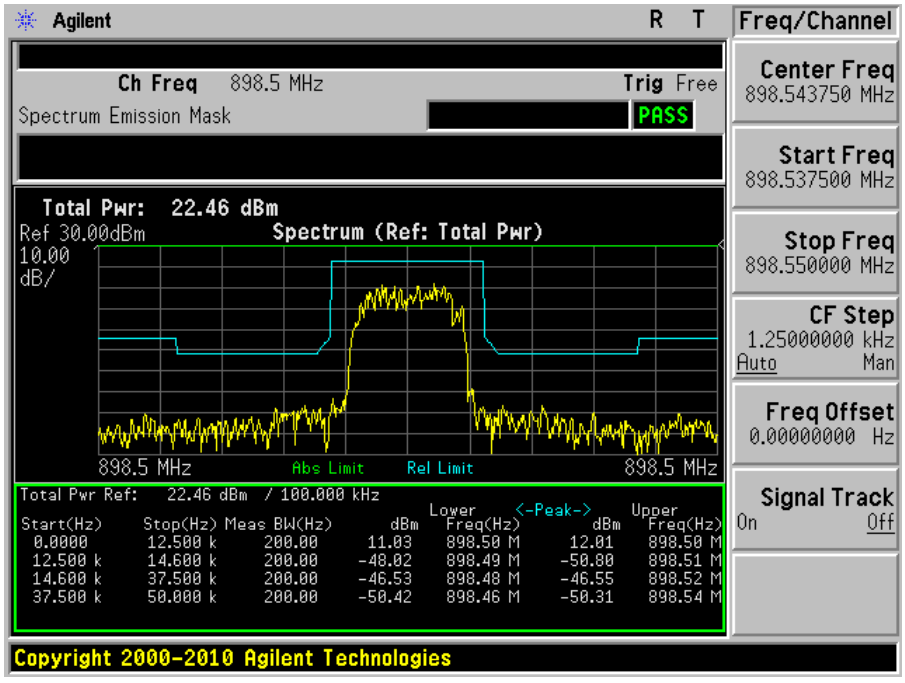
935-940 MHz Downlink

Middle Channel



896-901 MHz Uplink

Middle Channel



7 FCC §2.1051 & §90.669 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

7.1 Applicable Standard

Requirements: FCC §2.1051 & §90.669.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in §2.1057.

7.2 Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz. Sufficient scans were taken to show any out of band emissions up to 10^{th} harmonic.

7.3 Test Equipment List and Details

Manufacturers	Descriptions	Models	Serial Numbers	Calibration Dates
Agilent	Spectrum Analyzer	E4440A	MY44303352	2012-05-10
Agilent	Signal Generator	E4438C	MY45091309	2012-05-03
Rohde & Schwarz	Signal Generator	SMIQ03	849192/0085 / DE23746	2011-04-23[1]

Note 1: Two year calibration cycle.

***Statement of Traceability*:** BACL Corp. attests that all calibrations have been performed according to A2LA requirements, traceable to the NIST.

7.4 Test Environmental Conditions

Temperature:	21 °C
Relative Humidity:	52 %
ATM Pressure:	101.2kPa

The testing was performed by Lionel Lara on 2012-05-21 in RF Site.

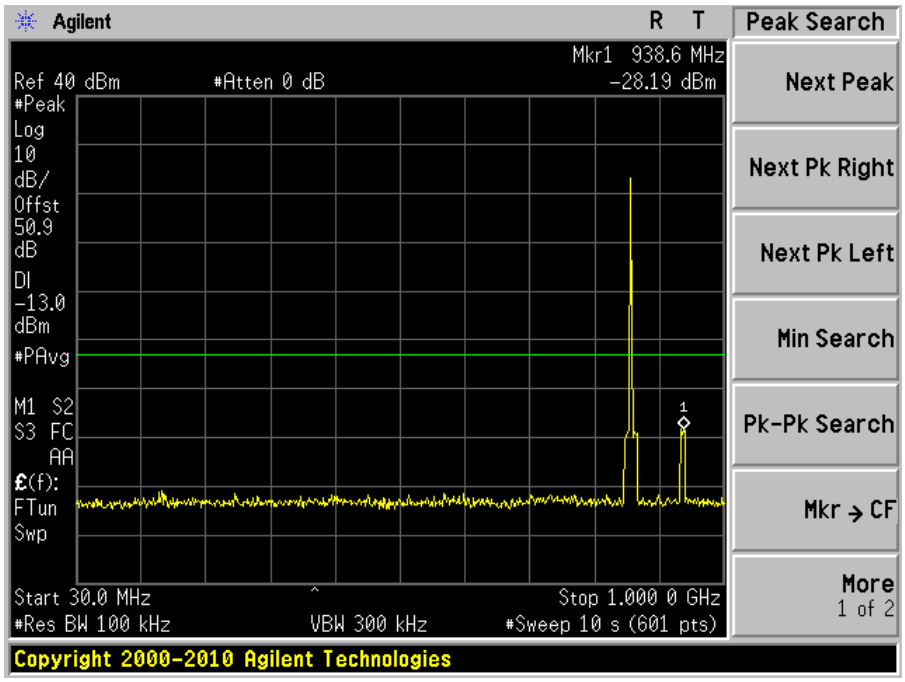
7.5 Test Results

Please refer to the following plots.

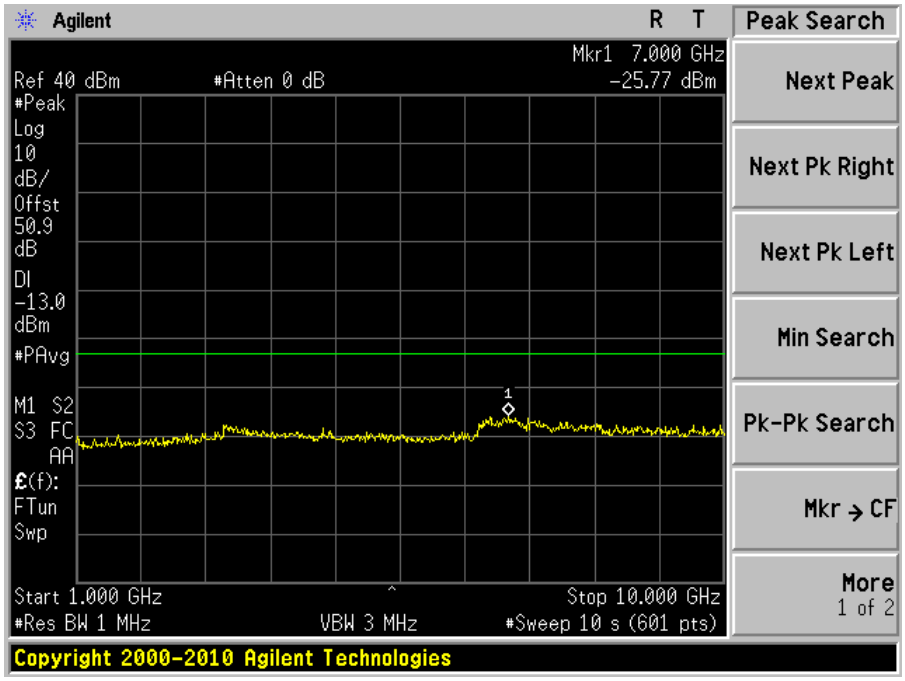
851-869 MHz Downlink

Middle Channel

30MHz to 1GHz



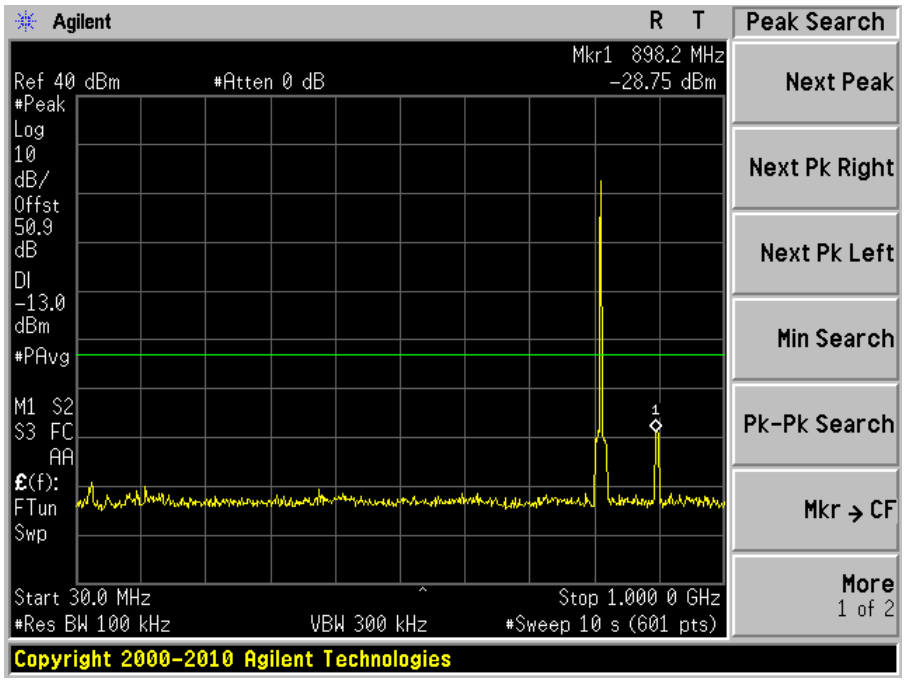
1GHz to 10GHz



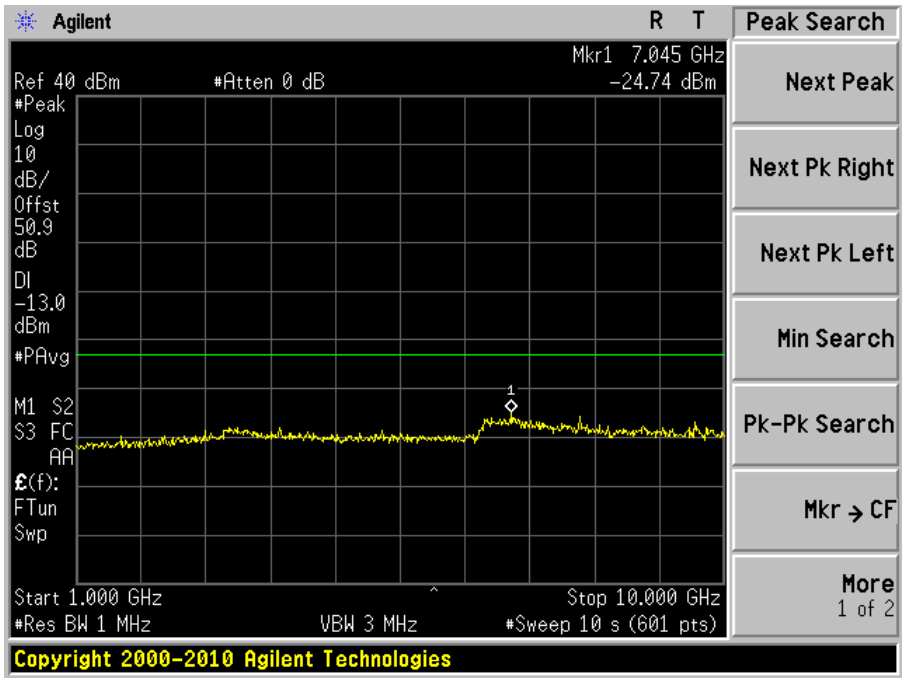
806-824 MHz Uplink

Middle Channel

30MHz to 1GHz



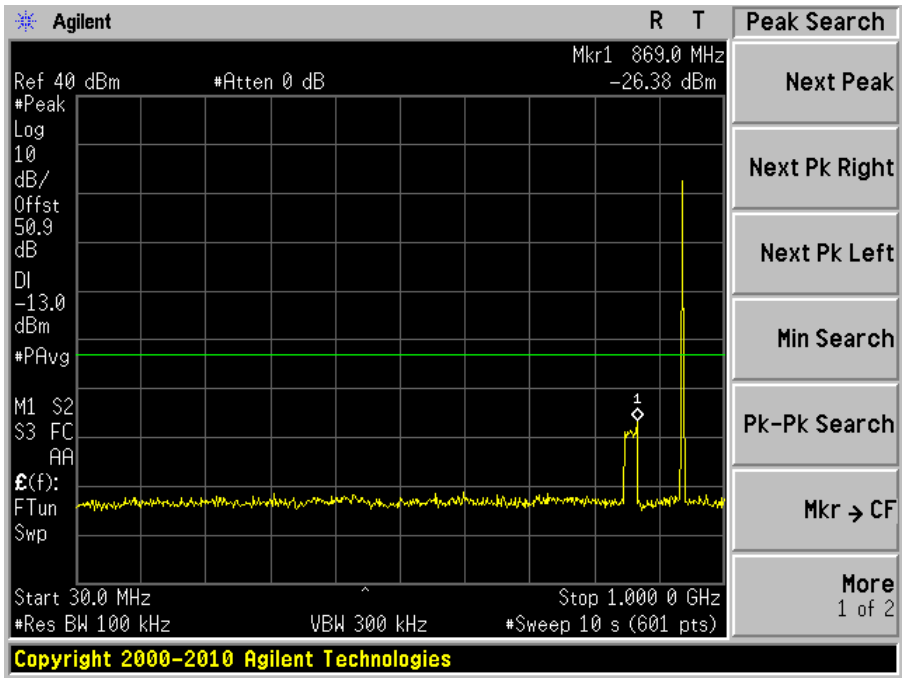
1GHz to 10GHz



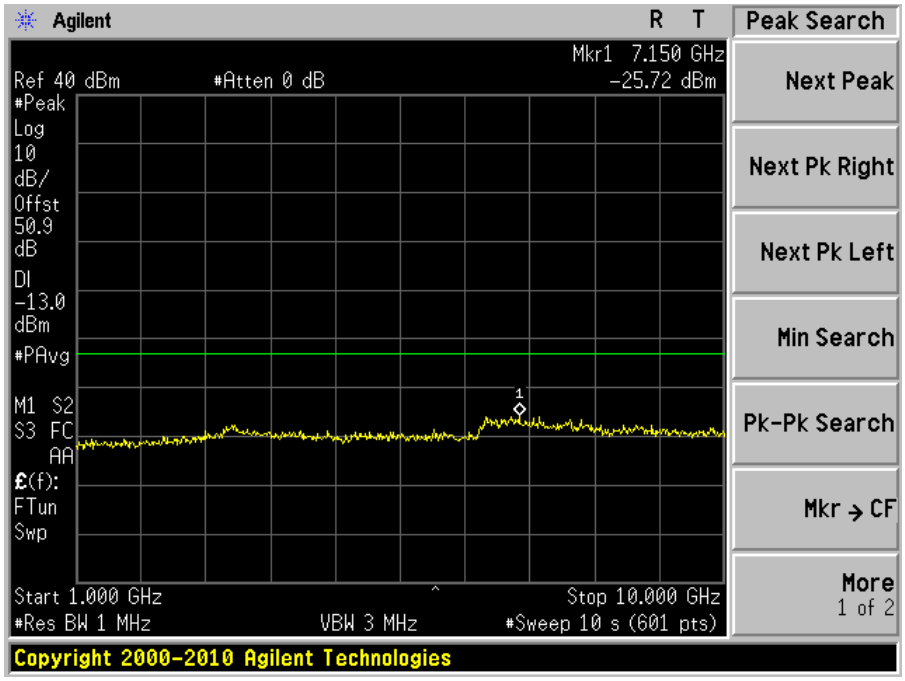
935-940 MHz Downlink

Middle Channel

30MHz to 1GHz



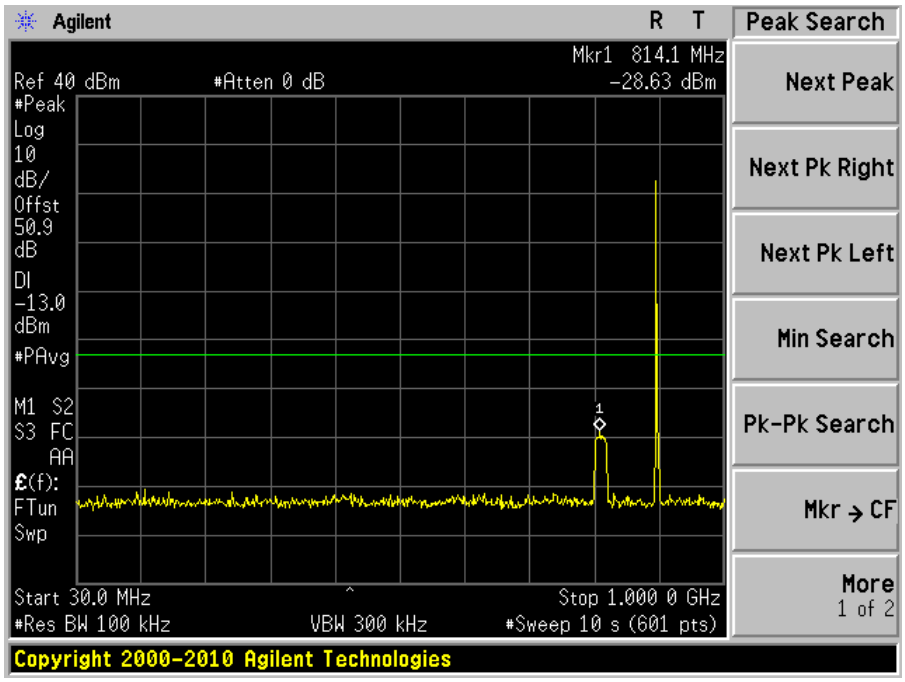
1GHz to 10GHz



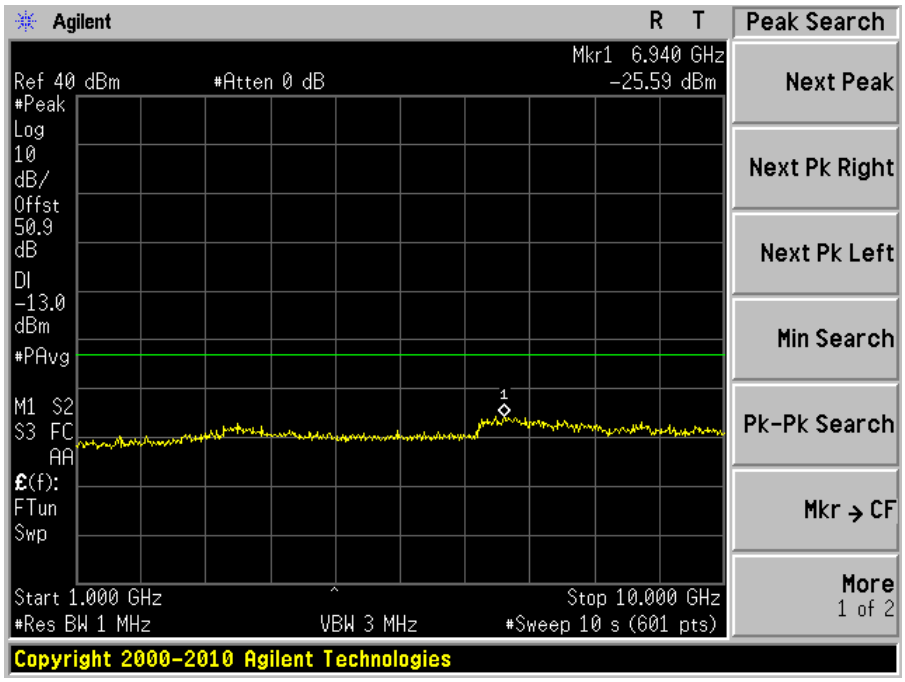
896-901 MHz Uplink

Middle Channel

30MHz to 1GHz



1GHz to 10GHz

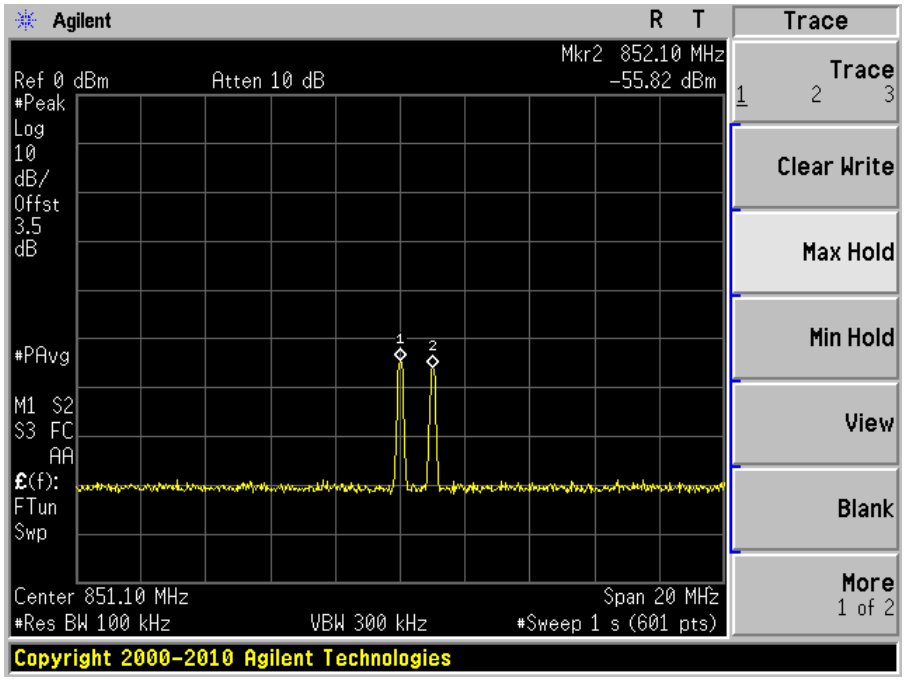


Inter-modulation

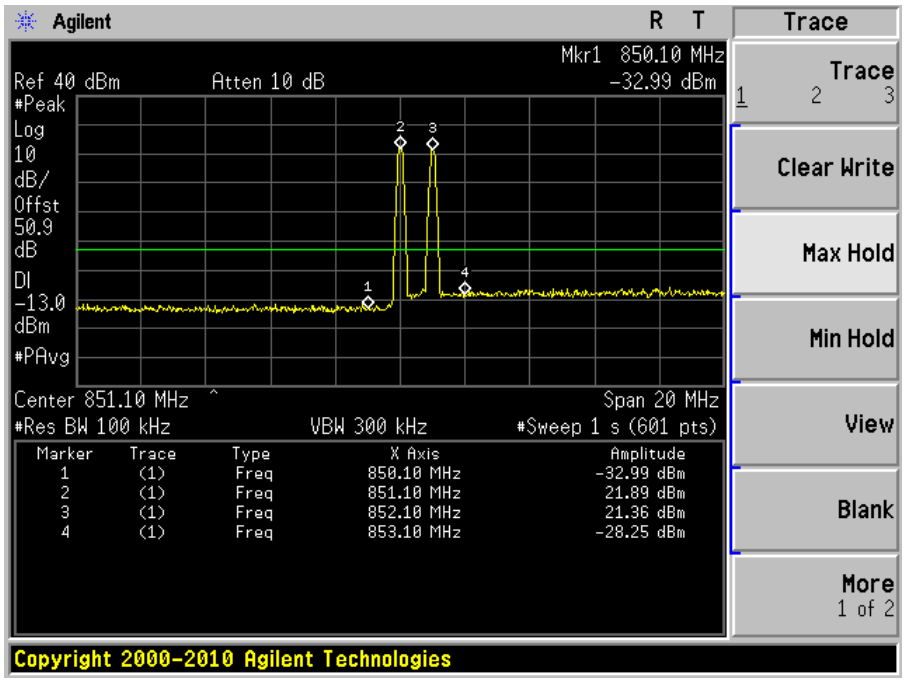
851-869 MHz Downlink

Low Channel

Input

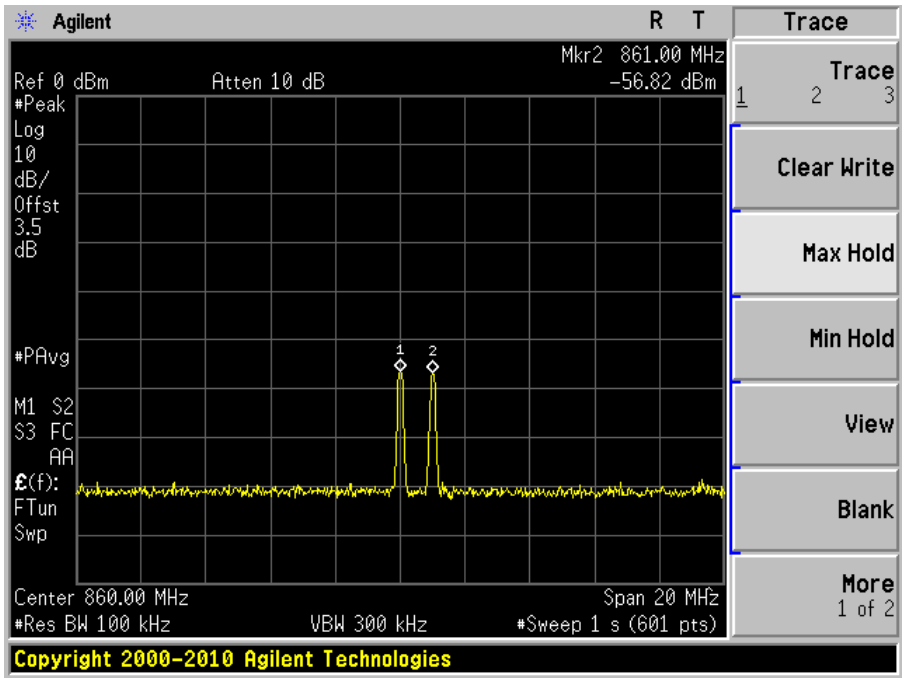


Output



Middle Channel

Input



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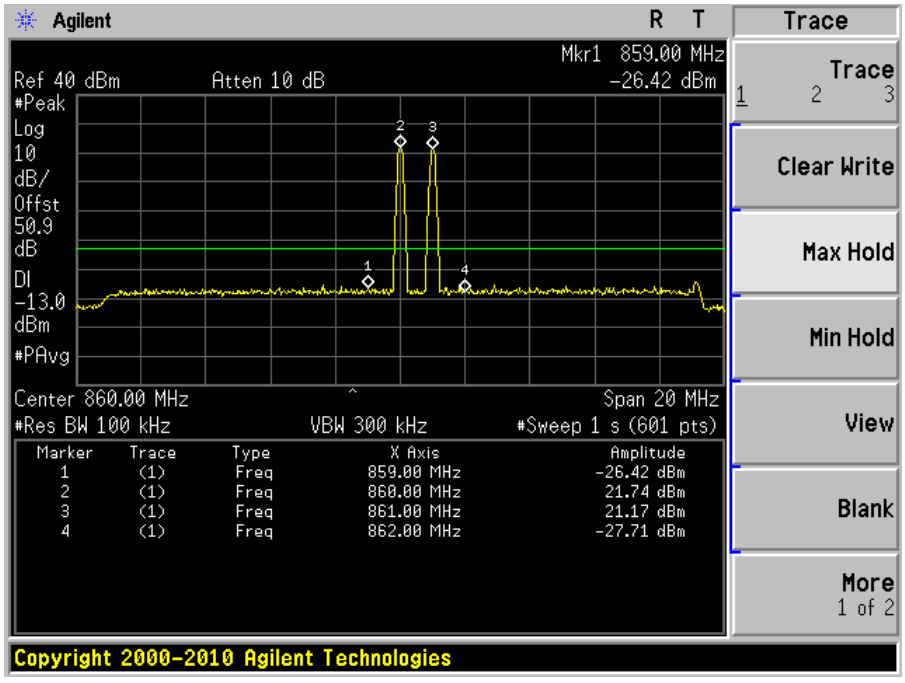
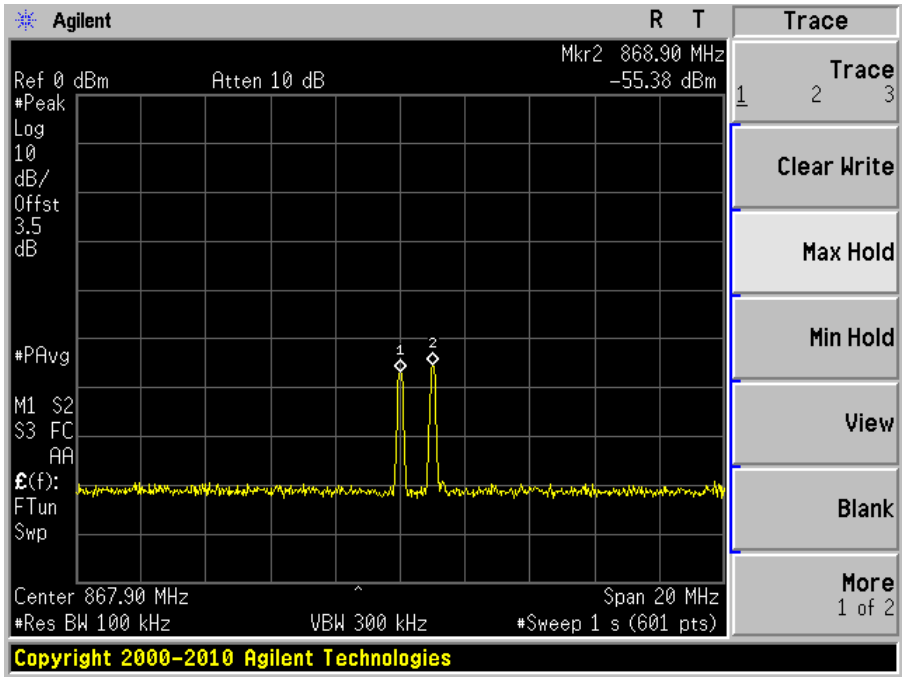
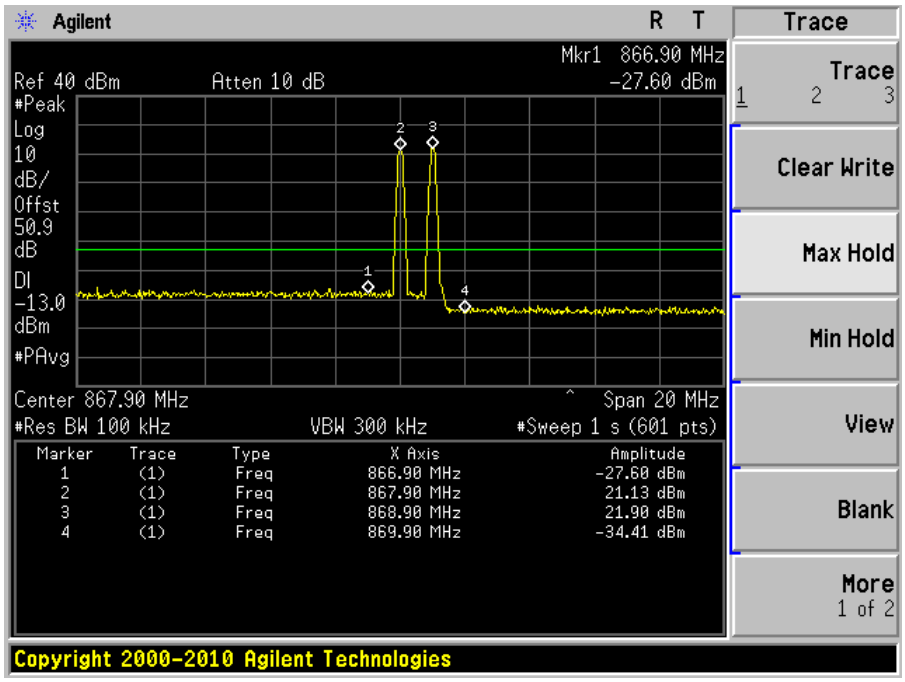


High Channel

Input



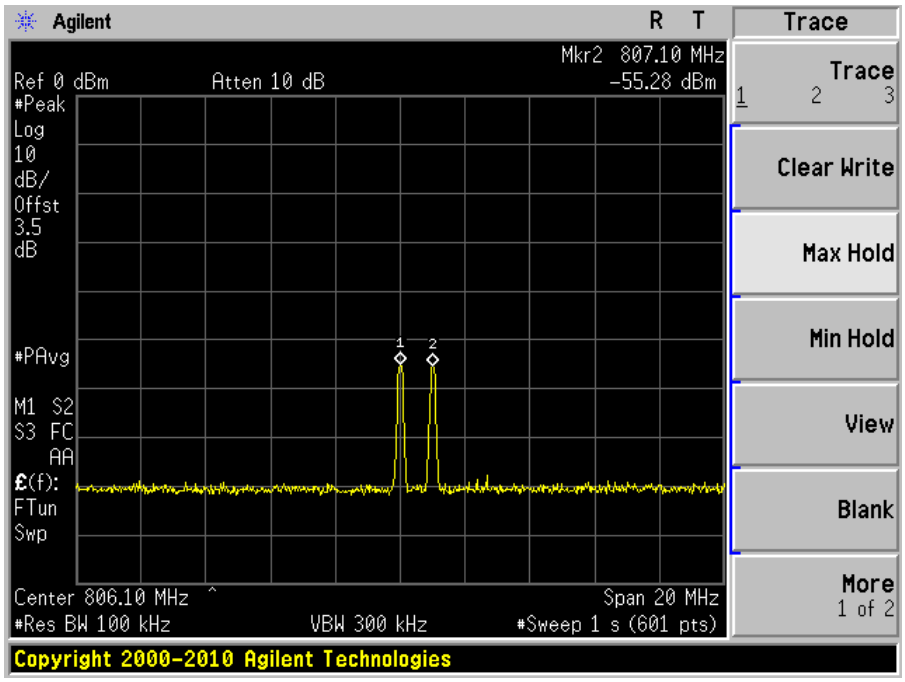
Output



806-824 MHz Uplink

Low Channel

Input



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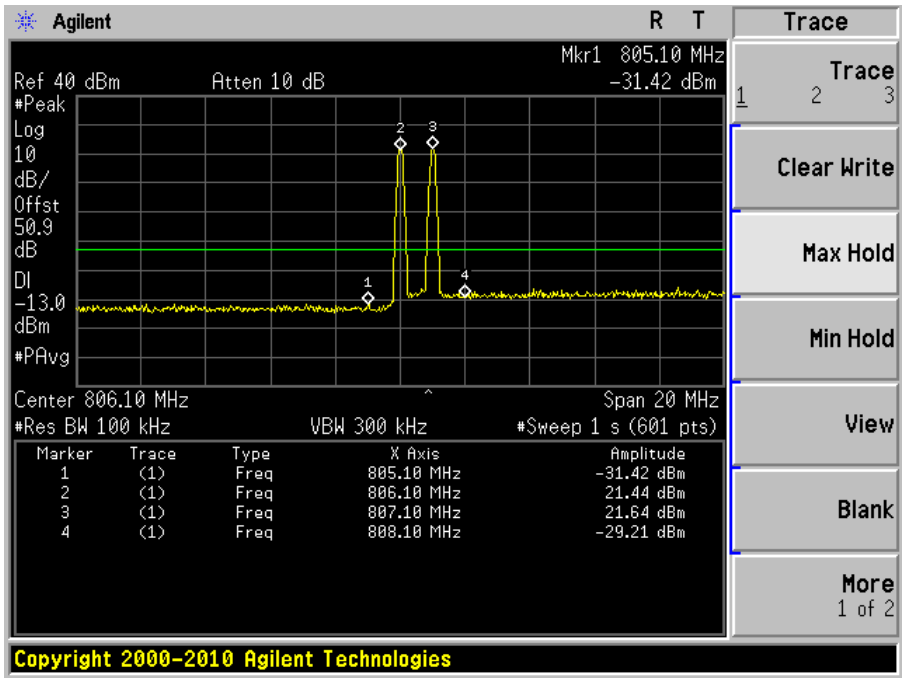
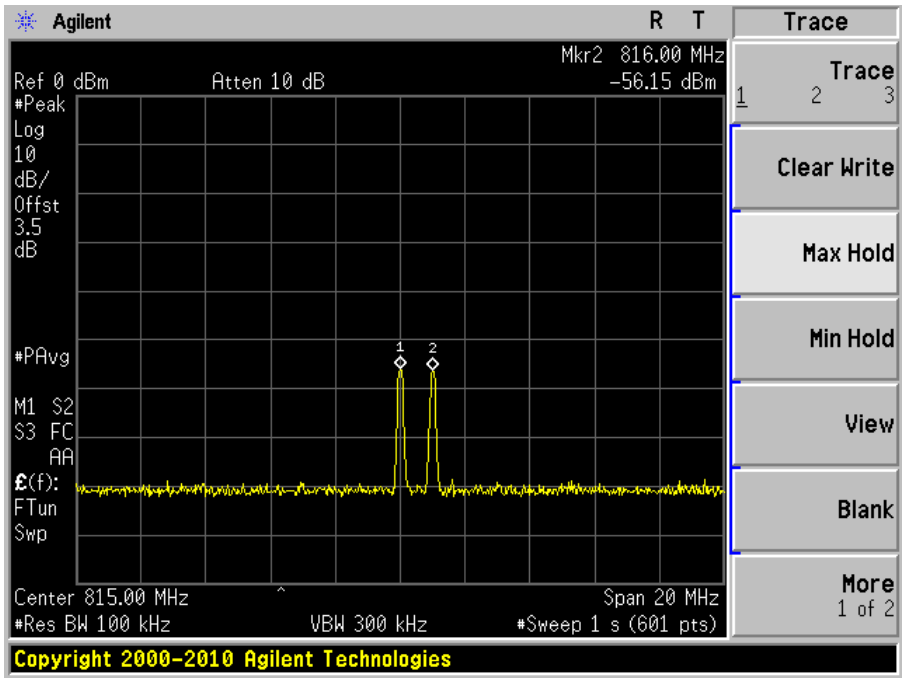


Middle Channel

Input



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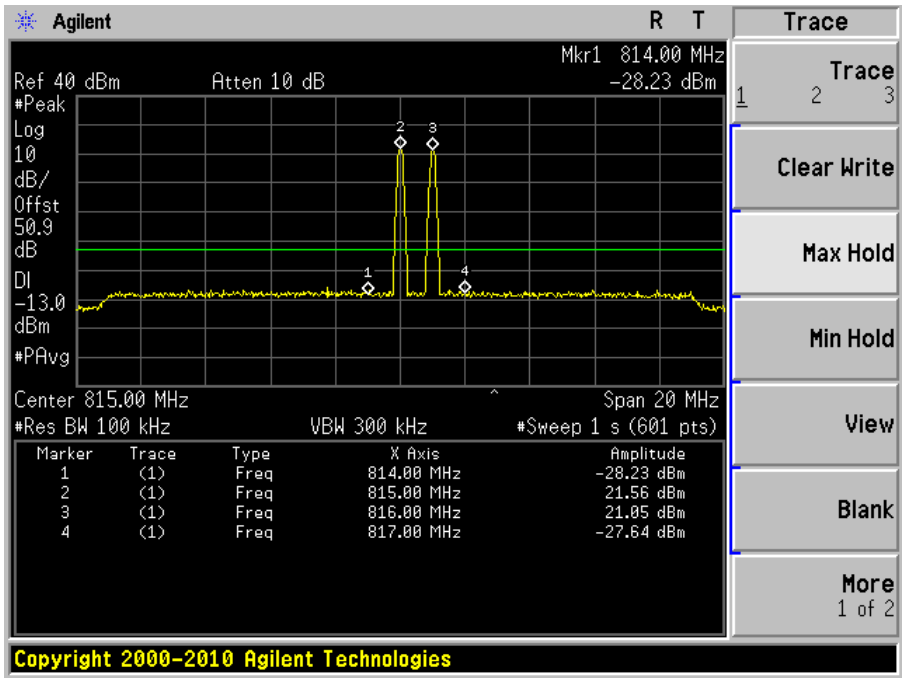
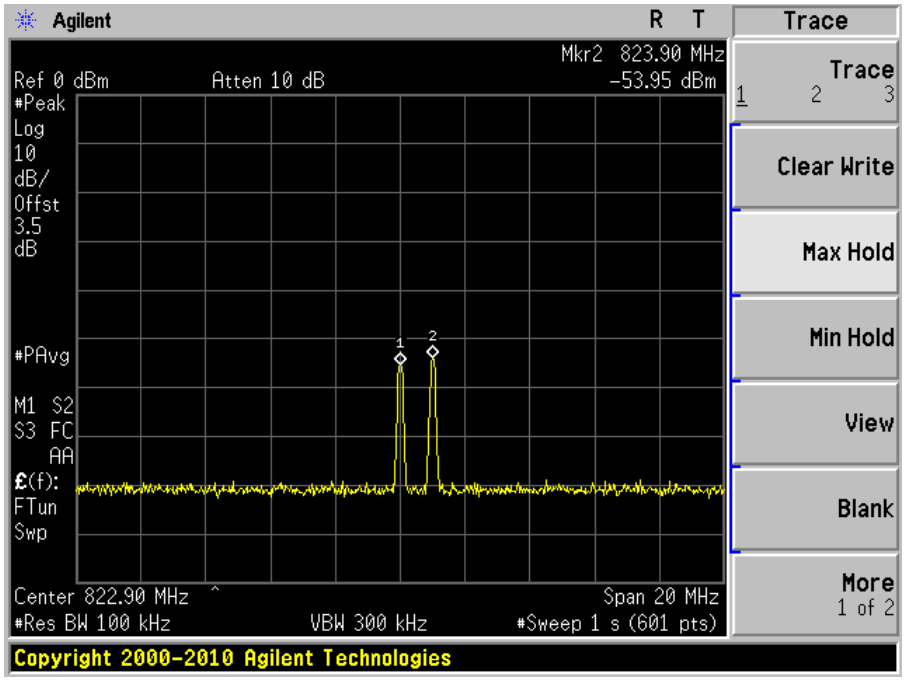
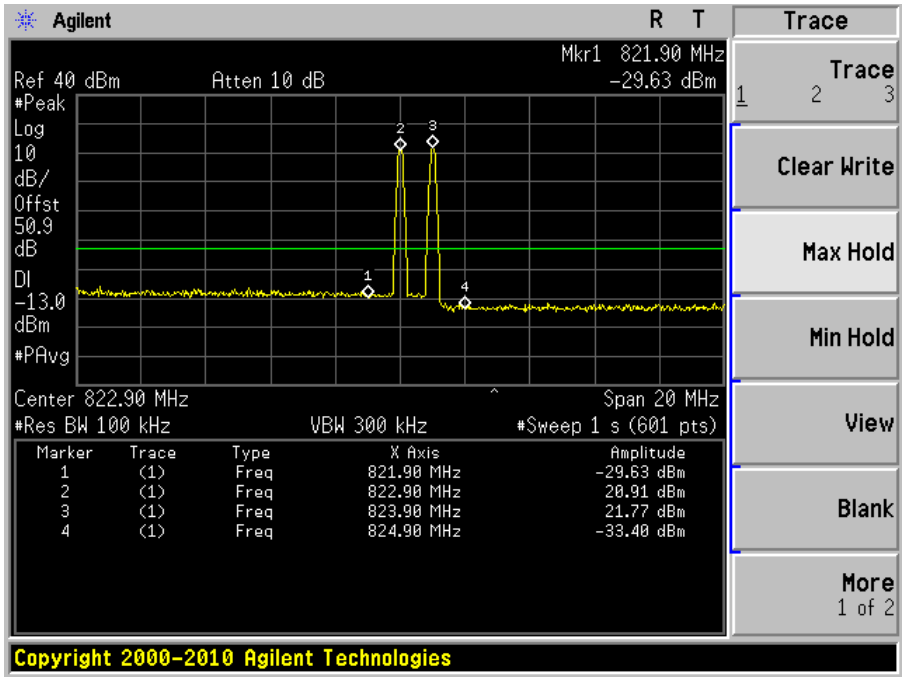


High Channel

Input



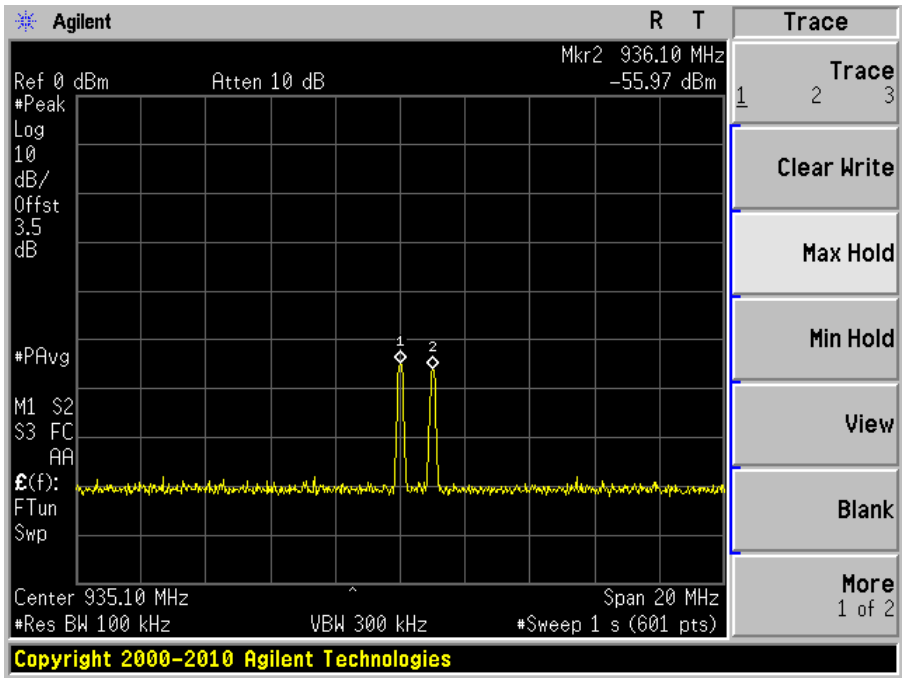
Output



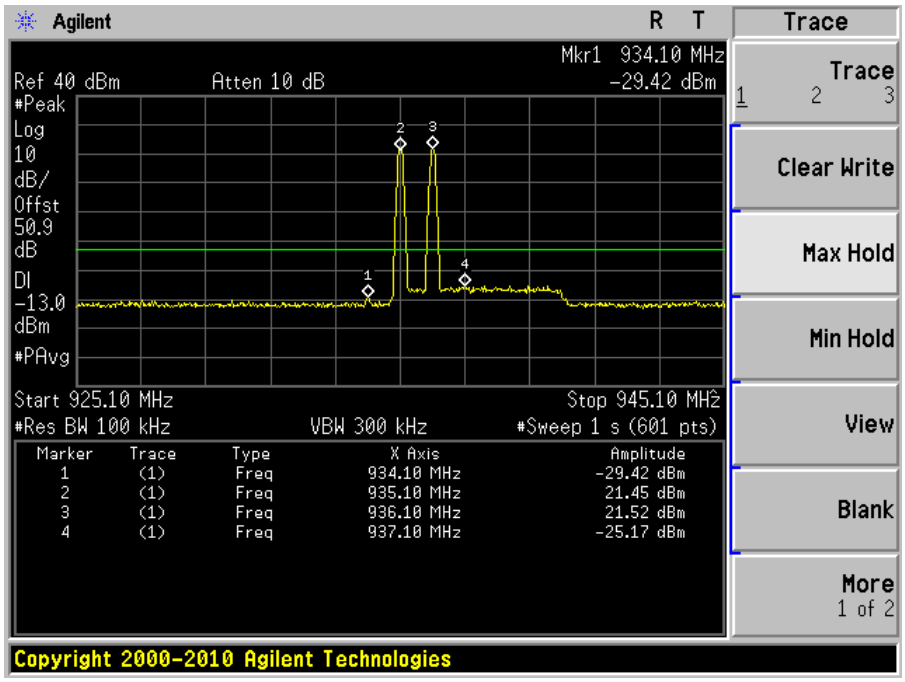
935-940 MHz Downlink

Low Channel

Input

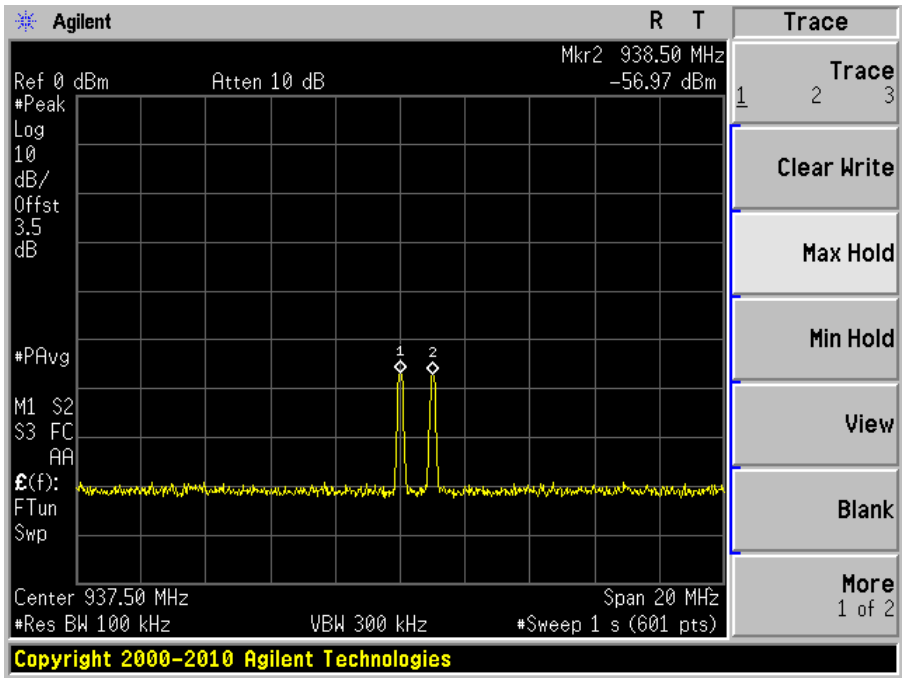


Output

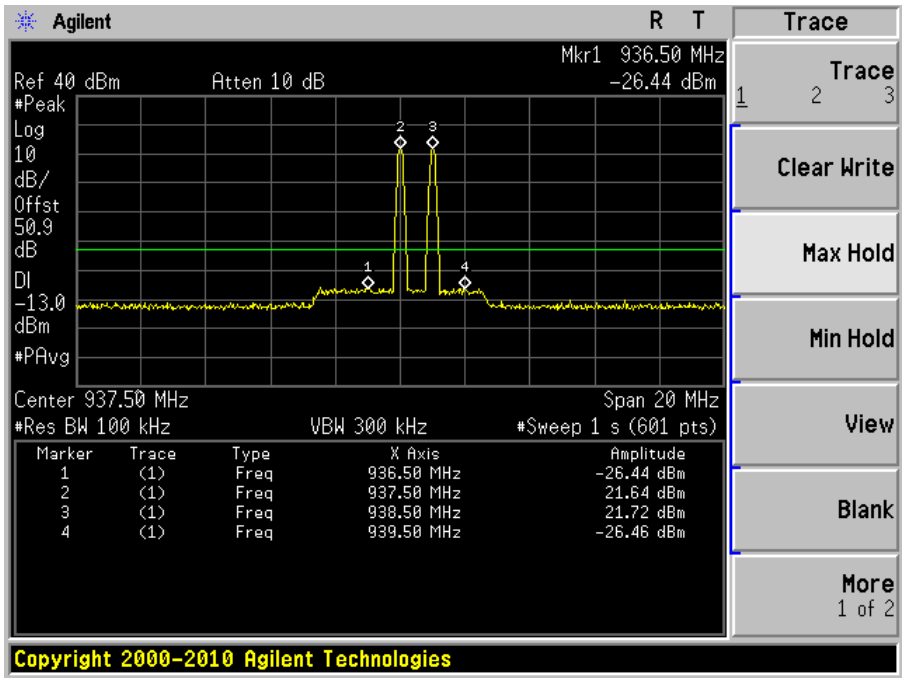


Middle Channel

Input

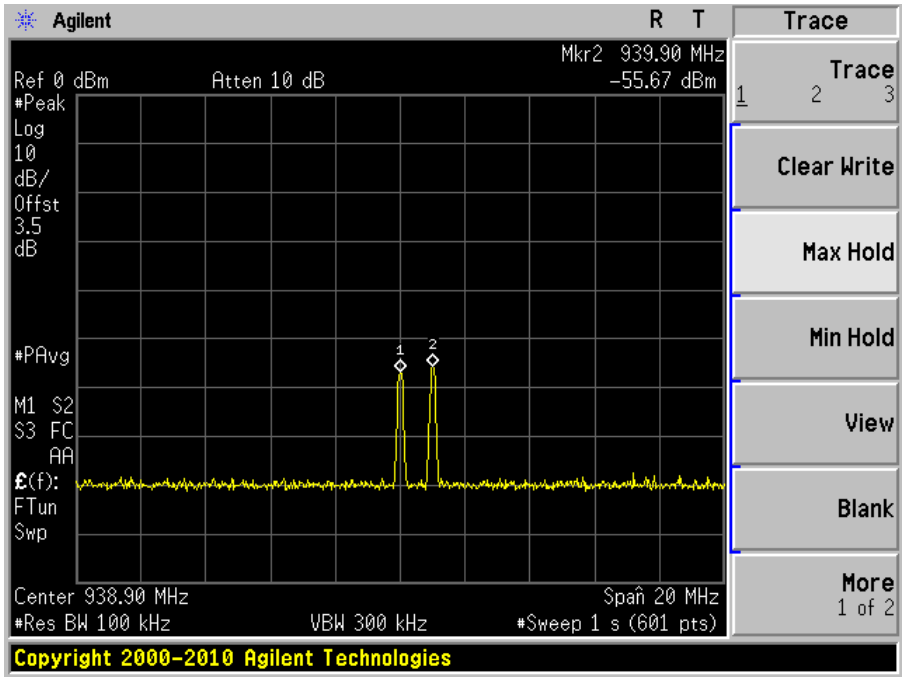


Output

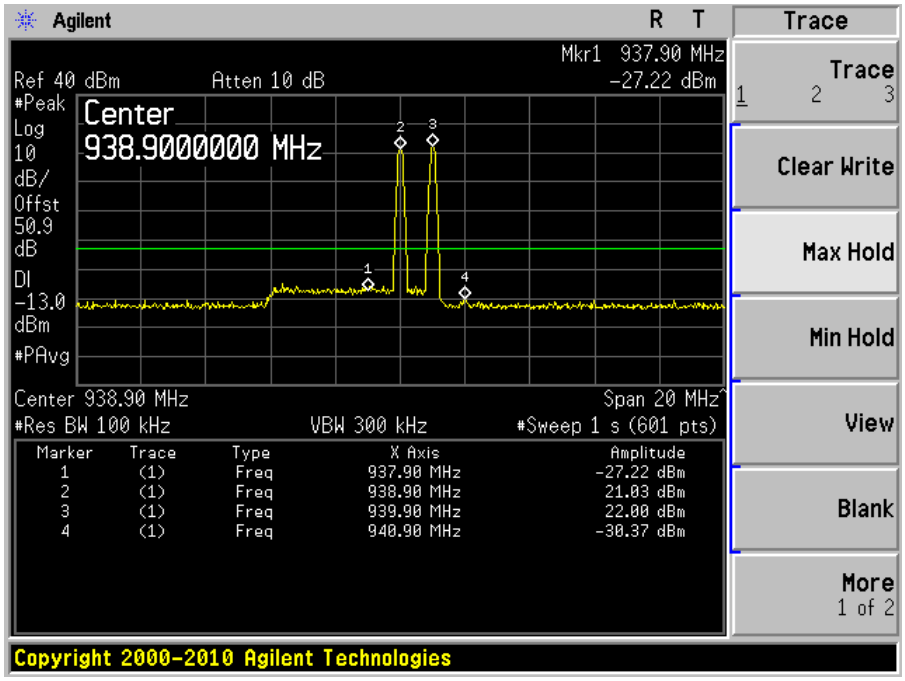


High Channel

Input



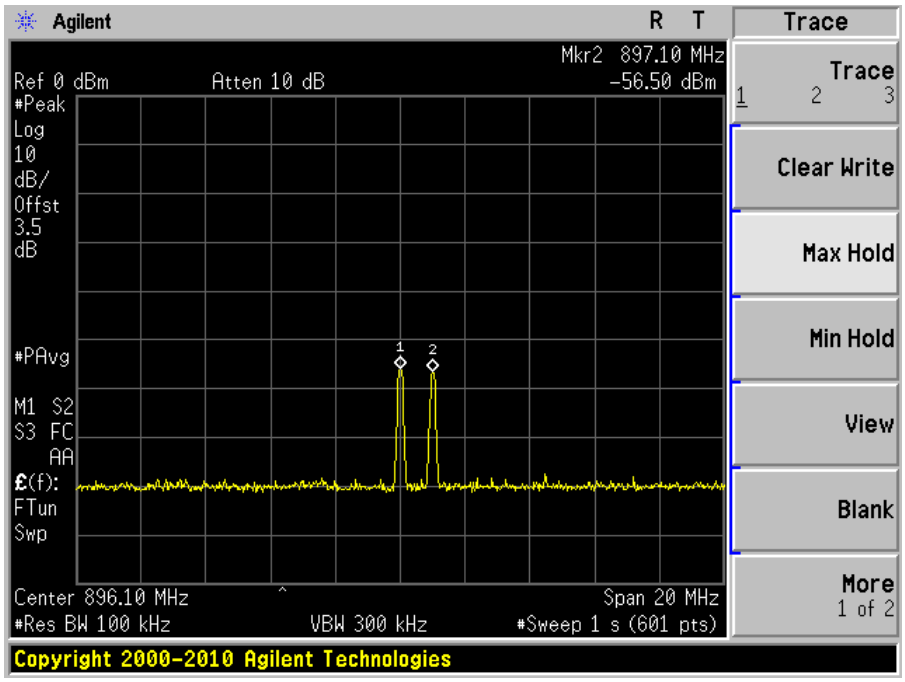
Output



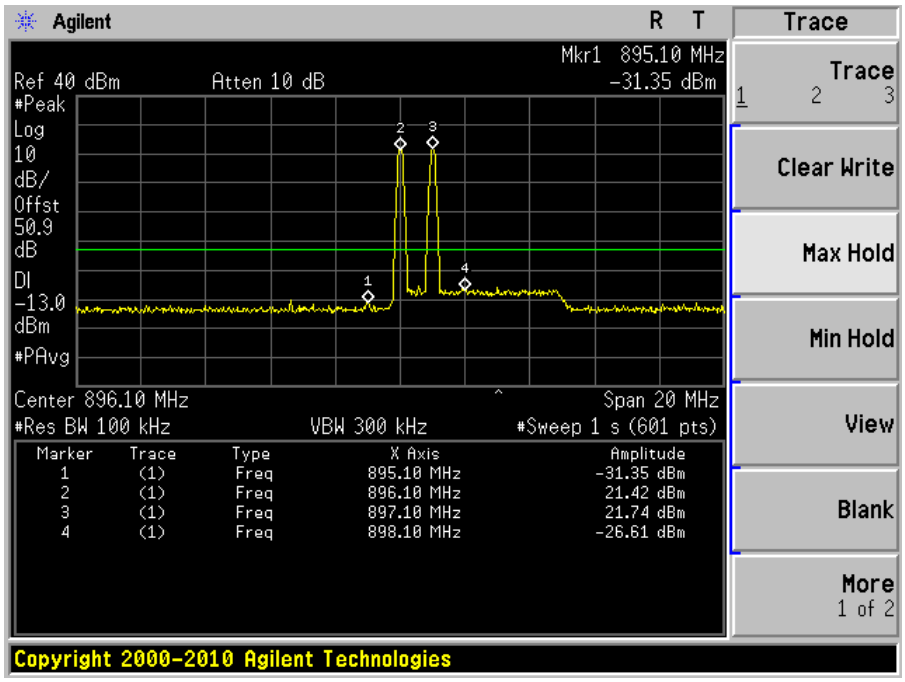
896-901 MHz Uplink

Low Channel

Input

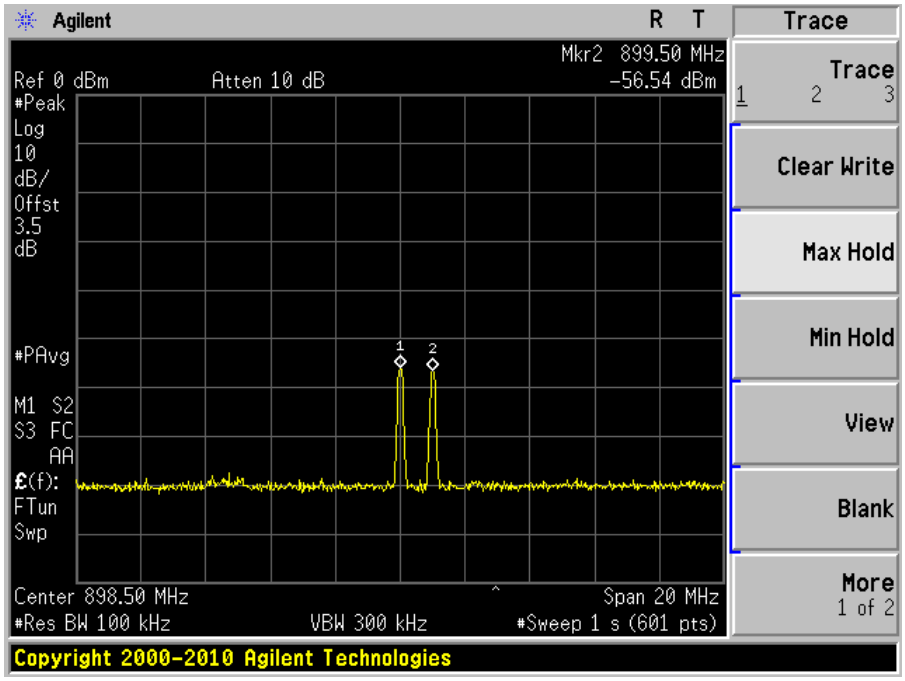


Output

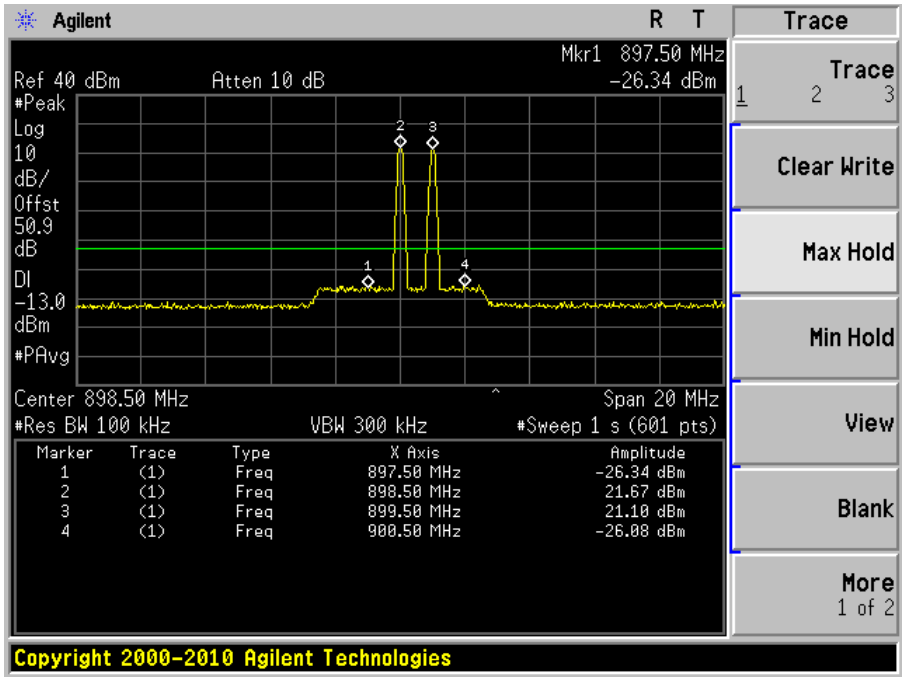


Middle Channel

Input

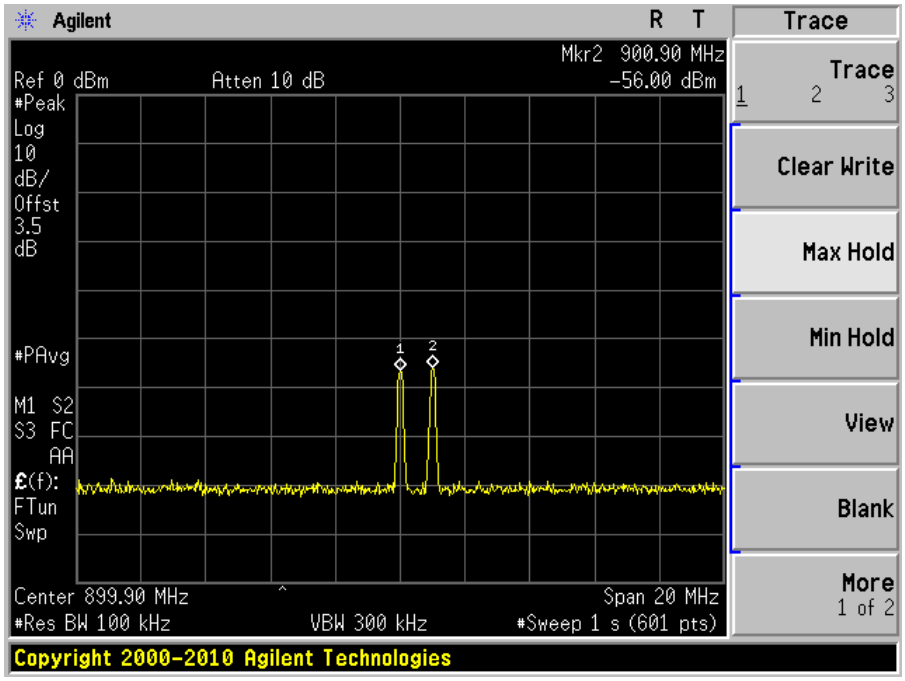


Output

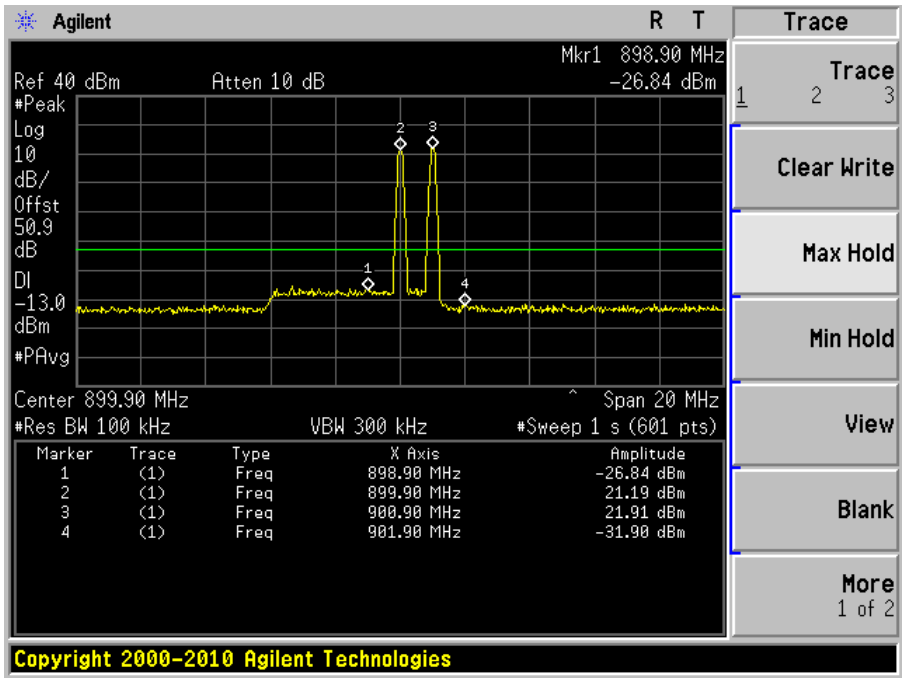


High Channel

Input



Output



8 FCC §2.1053 & §90.669 - SPURIOUS RADIATED EMISSIONS

8.1 Applicable Standard

Requirements: FCC §2.1053 & §90.669.

8.2 Test Procedure

The transmitter was placed on a turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = 10 log (TX Power in Watts/0.001) – the absolute level
Spurious attenuation limit in dB = 43 + 10 Log10 (power out in Watts)

8.3 Test Equipment List and Details

Manufacturers	Descriptions	Models	Serial Numbers	Calibration Dates
Agilent	Spectrum Analyzer	E4440A	MY44303352	2012-05-10
Sunol Science Corp	System Controller	SC99V	122303-1	N/R
Sunol Science Corp	Combination Antenna	JB3	A020106-2	2011-08-10
Hewlett Packard	Pre amplifier	8447D	2944A06639	2011-06-09
EMCO	Horn antenna	3115	9511-4627	2011-10-03
Mini-Circuits	Pre Amplifier	ZVA-183-S	570400946	2012-05-09
Eaton	Horn Antenna	96001	Mar-07	2011-10-03
Rohde & Schwarz	Signal Generator	SMIQ03	849192/0085 / DE23746	2011-04-23[1]

Note 1: Two year calibration cycle.

***Statement of Traceability*:** BACL Corp. attests that all calibrations have been performed according to A2LA requirements, traceable to the NIST.

8.4 Test Environmental Conditions

Temperature:	20-21 °C
Relative Humidity:	46-48 %
ATM Pressure:	101-102kPa

The testing was performed by Lionel Lara from 2012-05-23 to 2012-05-24 in 5 Meter Chamber 3.

8.5 Test Results

851-869 MHz Downlink- Worst Channel

Indicated		Turntable Azimuth (degree)	Test Antenna		Substituted					Limit (dBm)	Margin (dB)
Frequency (MHz)	S.A. Amp. (dBuV)		Height (m)	Polarity (H/V)	Frequency (MHz)	Level (dBm)	Ant. Cord. (dB)	Cable Loss (dB)	Absolute Level (dBm)		
1200	53.74	0	202	H	1200	-47.32	5.47	1.35	-43.2	-13	-30.2
1200	47.88	255	143	V	1200	-53.18	5.73	1.35	-48.8	-13	-35.8

806-824 MHz Uplink- Worst Channel

Indicated		Turntable Azimuth (degree)	Test Antenna		Substituted					Limit (dBm)	Margin (dB)
Frequency (MHz)	S.A. Amp. (dBuV)		Height (m)	Polarity (H/V)	Frequency (MHz)	Level (dBm)	Ant. Cord. (dB)	Cable Loss (dB)	Absolute Level (dBm)		
1200	55.05	0	204	H	1200	-46.01	5.47	1.35	-41.89	-13	-28.89
1200	49.32	331	144	V	1200	-51.74	5.73	1.35	-47.36	-13	-34.36

935-940 MHz Downlink- Worst Channel

Indicated		Turntable Azimuth (degree)	Test Antenna		Substituted					Limit (dBm)	Margin (dB)
Frequency (MHz)	S.A. Amp. (dBuV)		Height (m)	Polarity (H/V)	Frequency (MHz)	Level (dBm)	Ant. Cord. (dB)	Cable Loss (dB)	Absolute Level (dBm)		
1200	53.87	0	204	H	1200	-47.19	5.47	1.35	-43.07	-13	-30.07
1200	49.56	208	158	V	1200	-51.5	5.73	1.35	-47.12	-13	-34.12

896-901 MHz Uplink- Worst Channel

Indicated		Turntable Azimuth (degree)	Test Antenna		Substituted					Limit (dBm)	Margin (dB)
Frequency (MHz)	S.A. Amp. (dBuV)		Height (m)	Polarity (H/V)	Frequency (MHz)	Level (dBm)	Ant. Cord. (dB)	Cable Loss (dB)	Absolute Level (dBm)		
1200	53.85	0	200	H	1200	-47.21	5.47	1.35	-43.09	-13	-30.09
1200	47.08	334	142	V	1200	-53.98	5.73	1.35	-49.6	-13	-36.6

9 FCC §1.1310 & §2.1091 - RF EXPOSURE

9.1 Applicable Standard

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-1.34	614	1.63	*(100)	6
1.34-30	1842/f	4.89/f	*($900/f^2$)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6

f = frequency in MHz
* = Plane-wave equivalent power density

9.2 MPE Prediction

Predication of MPE limit at a given distance, equation from OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density
P = power input to antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

9.3 Test Results

800 MHz Band UL:

Maximum peak output power at antenna input terminal (dBm):	24.56
Maximum peak output power at antenna input terminal (mW):	285.76
Prediction distance (cm):	20
Prediction frequency (MHz):	823.9
Antenna Gain, typical (dBi):	12
Maximum Antenna Gain (numeric):	15.85
Power density at predication frequency and distance (mW/cm^2):	0.901
MPE limit for controlled exposure at predication frequency (mW/cm^2):	2.746

800 MHz Band DL:

Maximum peak output power at antenna input terminal (dBm):	24.74
Maximum peak output power at antenna input terminal (mW):	297.85
Prediction distance (cm):	20
Prediction frequency (MHz):	860
Antenna Gain, typical (dBi):	12
Maximum Antenna Gain (numeric):	15.85
Power density at predication frequency and distance (mW/cm^2):	0.939
MPE limit for controlled exposure at predication frequency (mW/cm^2):	2.867

900 MHz Band UL:

Maximum peak output power at antenna input terminal (dBm):	24.24
Maximum peak output power at antenna input terminal (mW):	265.46
Prediction distance (cm):	20
Prediction frequency (MHz):	900.9
Antenna Gain, typical (dBi):	12
Maximum Antenna Gain (numeric):	15.85
Power density at predication frequency and distance (mW/cm^2):	0.837
MPE limit for controlled exposure at predication frequency (mW/cm^2):	3.003

900 MHz Band DL:

Maximum peak output power at antenna input terminal (dBm):	24.72
Maximum peak output power at antenna input terminal (mW):	296.48
Prediction distance (cm):	20
Prediction frequency (MHz):	935.1
Antenna Gain, typical (dBi):	12
Maximum Antenna Gain (numeric):	15.85
Power density at predication frequency and distance (mW/cm^2):	0.935
MPE limit for controlled exposure at predication frequency (mW/cm^2):	3.117

Result

The highest power density level at 20 cm is below the MPE controlled limit.

10 EXHIBIT A - FCC ID LABELING AND WARNING STATEMENT

10.1 FCC ID Label Requirement

FCC § 2.925 Identification of equipment

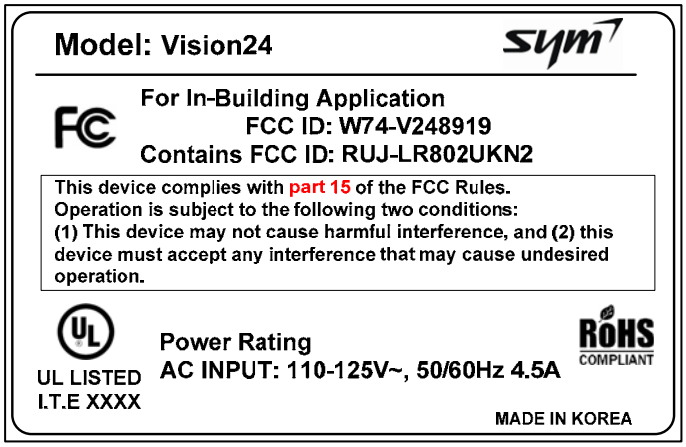
(a) Each equipment covered in an application for equipment authorization shall bear a nameplate or label listing the following:

(1) FCC Identifier consisting of the two elements in the exact order specified in §2.926. The FCC Identifier shall be preceded by the term *FCC ID* in capital letters on a single line, and shall be of a type size large enough to be legible without the aid of magnification.

Example: FCC ID XXX123. XXX—Grantee Code 123—Equipment Product Code

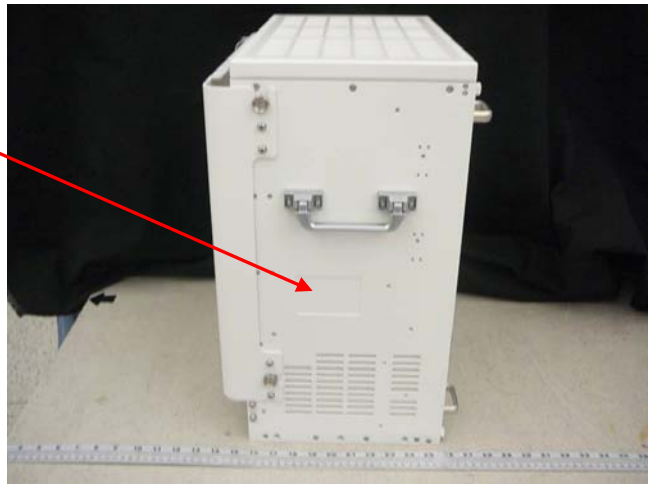
FCC ID: XXX-XXXXXX

10.2 FCC ID Label Content



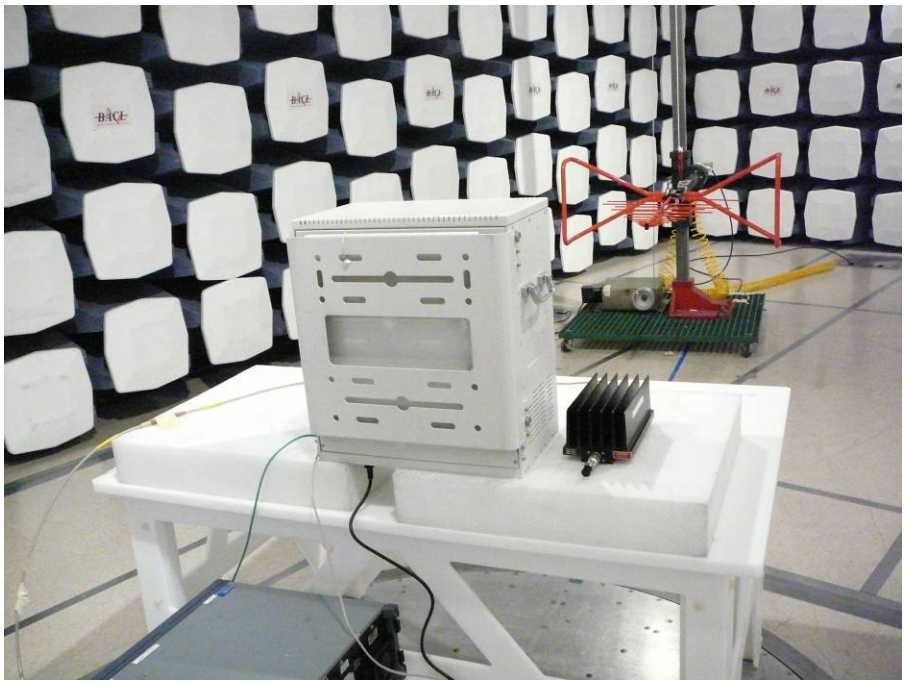
10.3 FCC ID Label

Label here

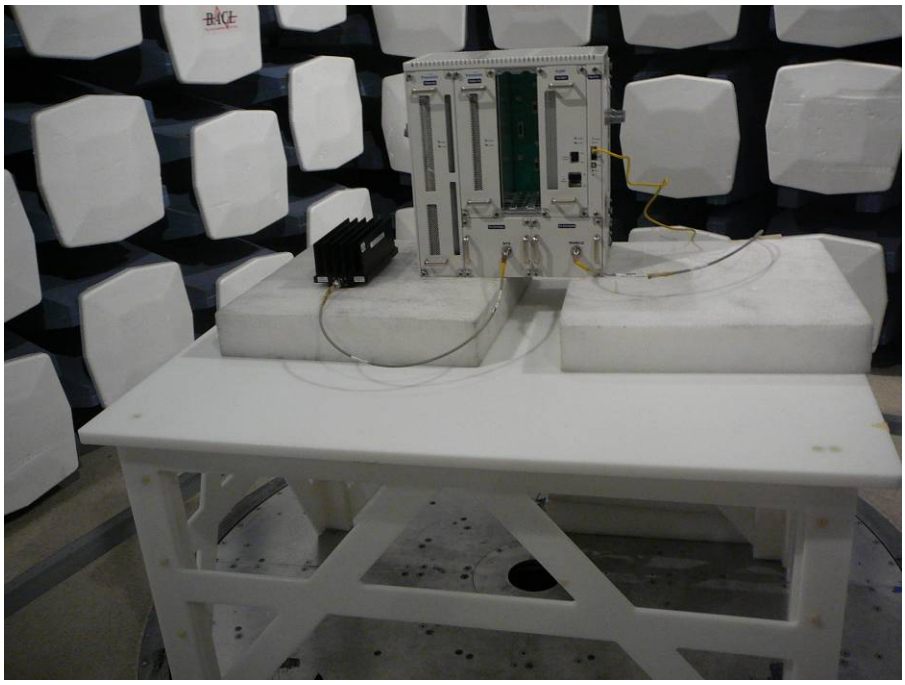


11 EXHIBIT B - TEST SETUP PHOTOGRAPHS

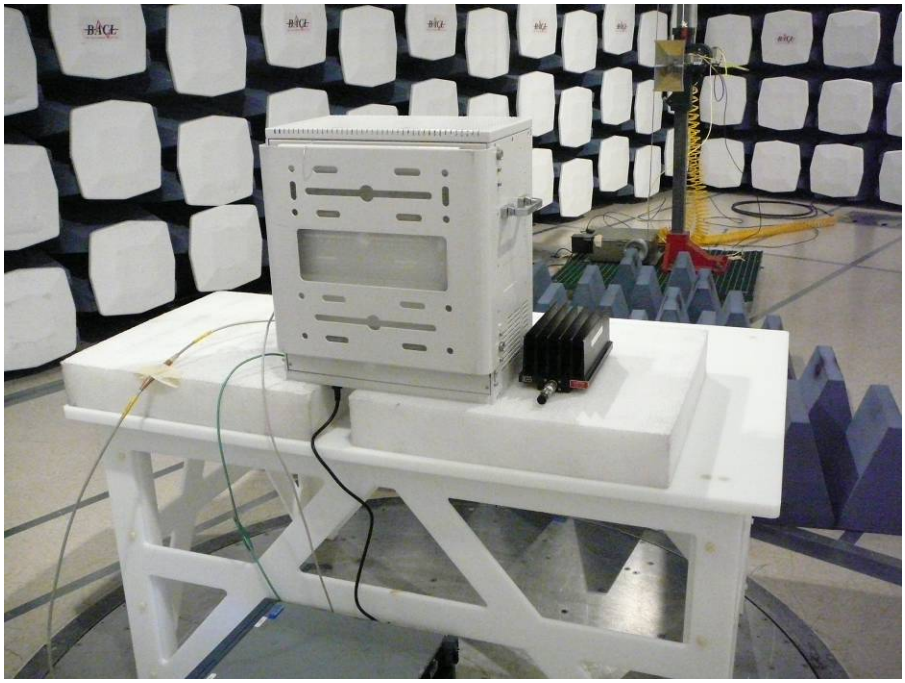
11.1 Radiated Emissions – Rear View (Below 1 GHz)



11.2 Radiated Emissions - Front View (Below 1 GHz)

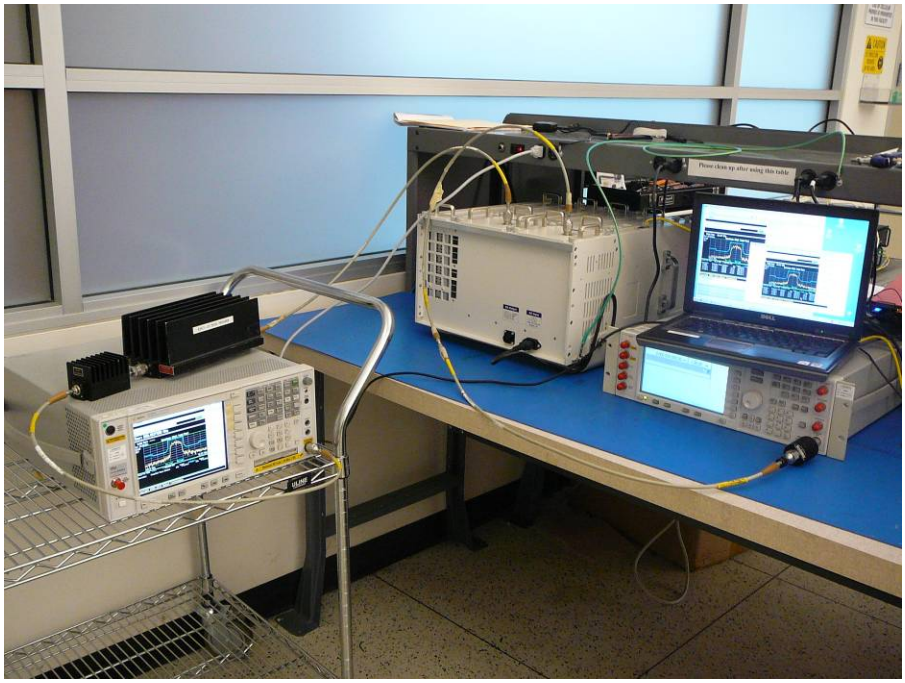


11.3 Radiated Emissions - Rear View (Above 1 GHz)



11.4 Radiated Emissions - Front View (Above 1 GHz)

11.5 Bench Setup View

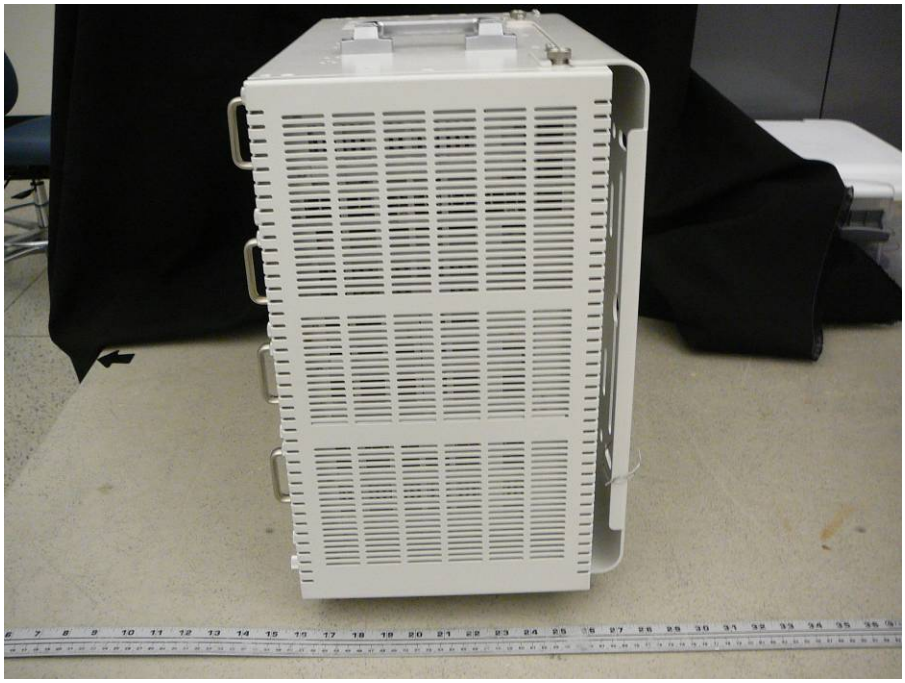


12 EXHIBIT C - EUT PHOTOGRAPHS

12.1 EUT-Main Frame Enclosure Front View

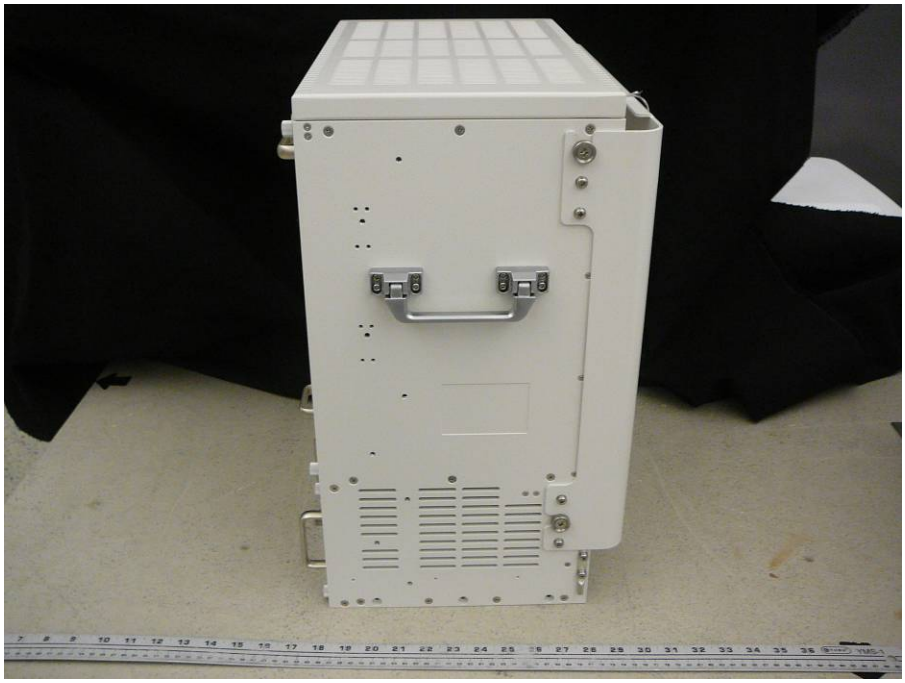
12.2 EUT-Main Frame Enclosure Rear View

12.3 EUT-Main Frame Enclosure Top View



12.4 EUT-Main Frame Enclosure Bottom View

12.5 EUT-Main Frame Enclosure Left Side View



12.6 EUT-Main Frame Enclosure Right Side View

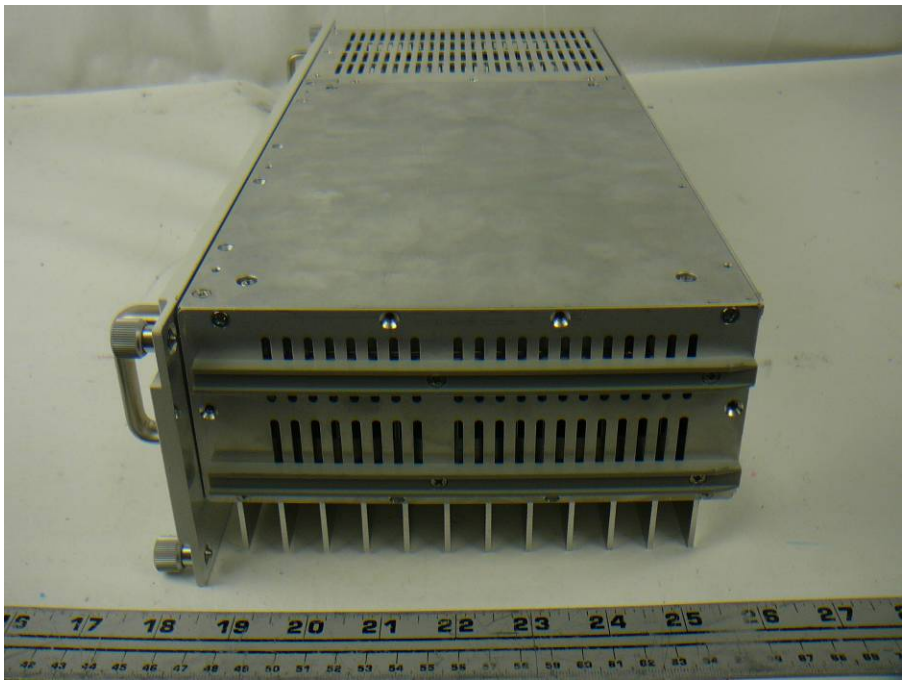
12.7 EUT-Main Frame Enclosure Open View 1

12.8 EUT-Main Frame Enclosure Open View 2

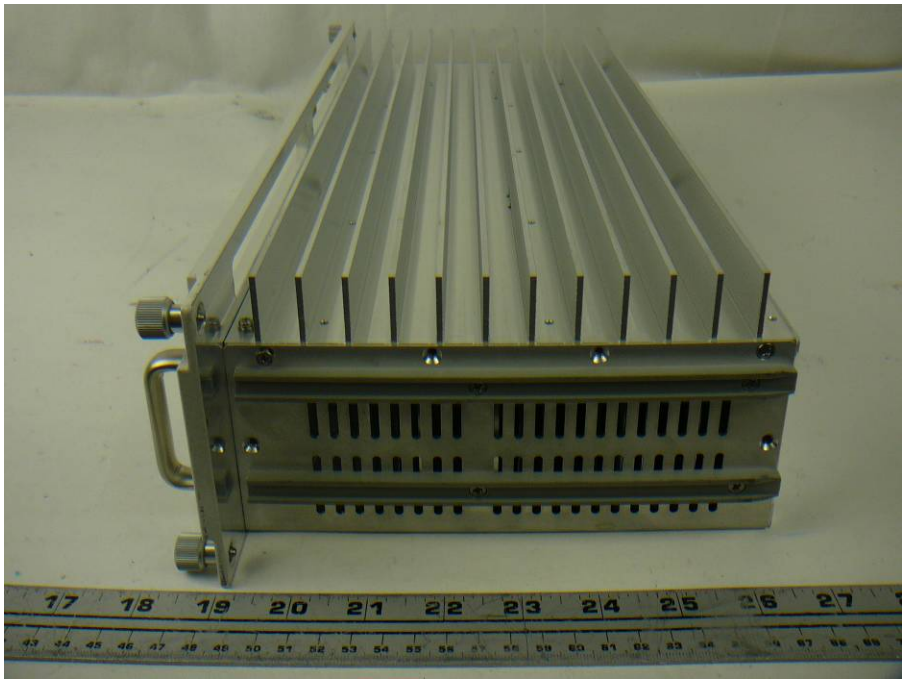
12.9 Vision24 800/900MHz Service Card Front View

12.10 Vision24 800/900MHz Service Card Rear View

12.11 Vision24 800/900MHz Service Card Top View



12.12 Vision24 800/900MHz Service Card Bottom View



12.13 Vision24 Filter and Combiner BTS Front View

12.14 Vision24 Filter and Combiner BTS Rear View

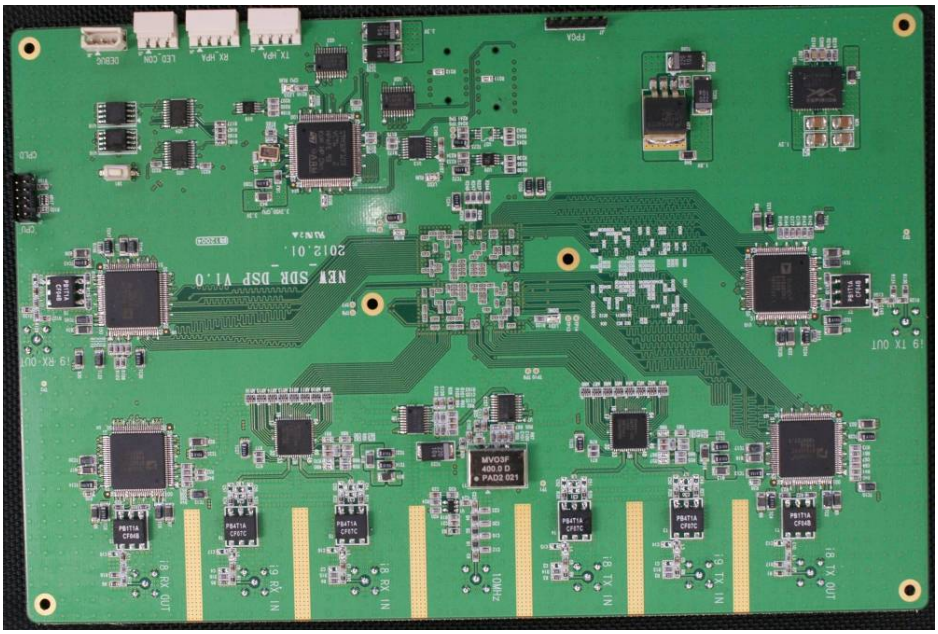
12.15 Vision24 Filter and Combiner Mobile Front View

12.16 Vision24 Filter and Combiner Mobile Rear View

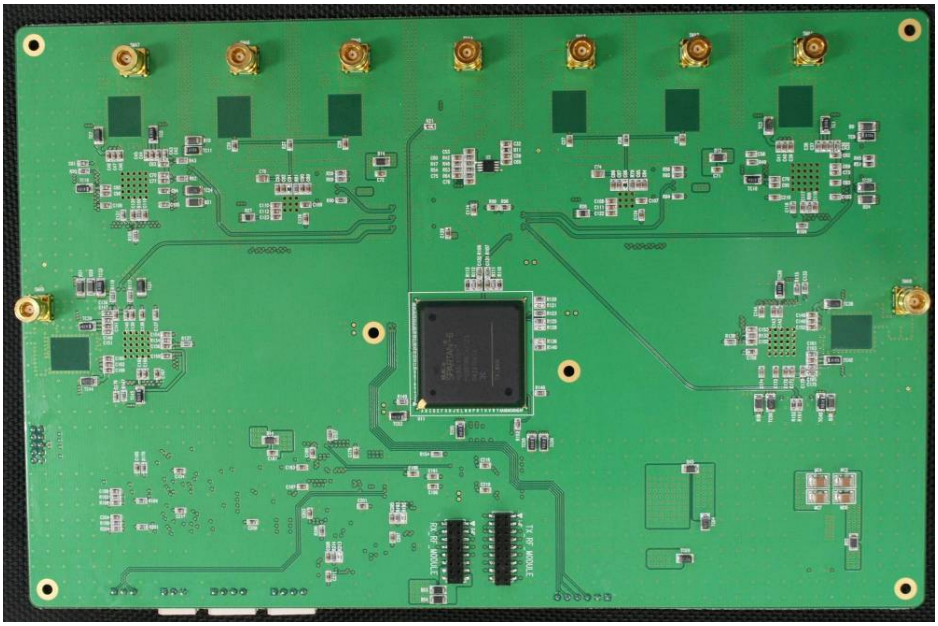
12.17 Vision24 Rectifier (Power Supply) Front View

12.18 Vision24 Network Controller Front View

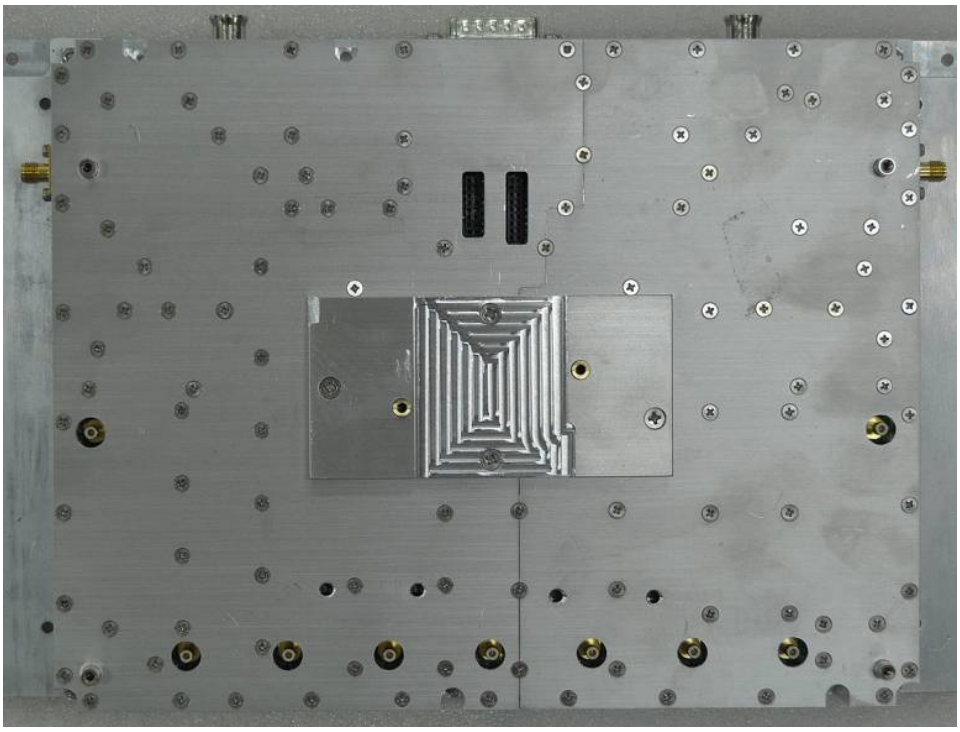
12.19 Vision24 800/900MHz Service Card Digital Unit PCB Top View



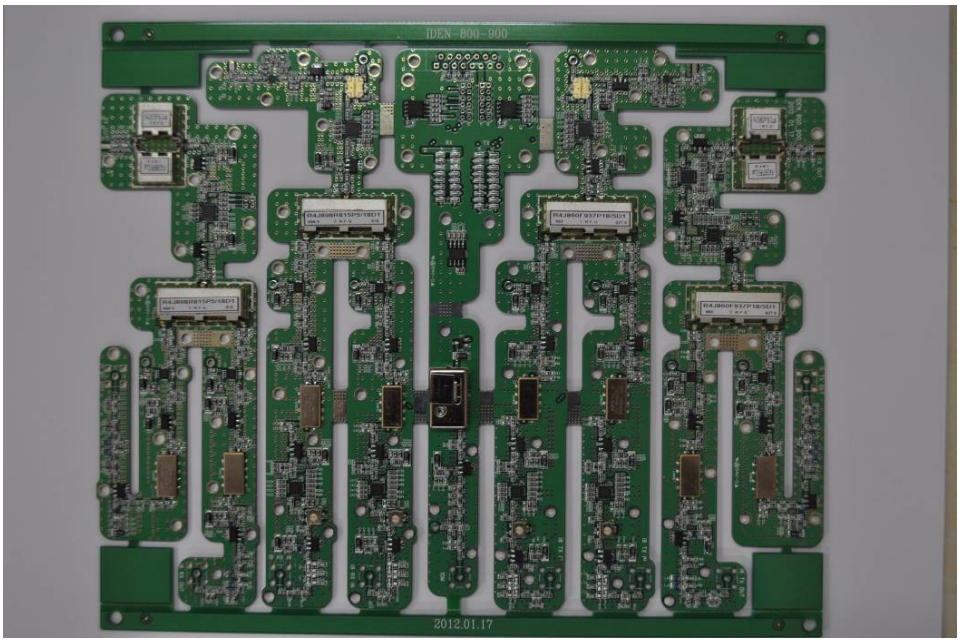
12.20 Vision24 800/900MHz Service Card Digital Unit PCB Bottom View



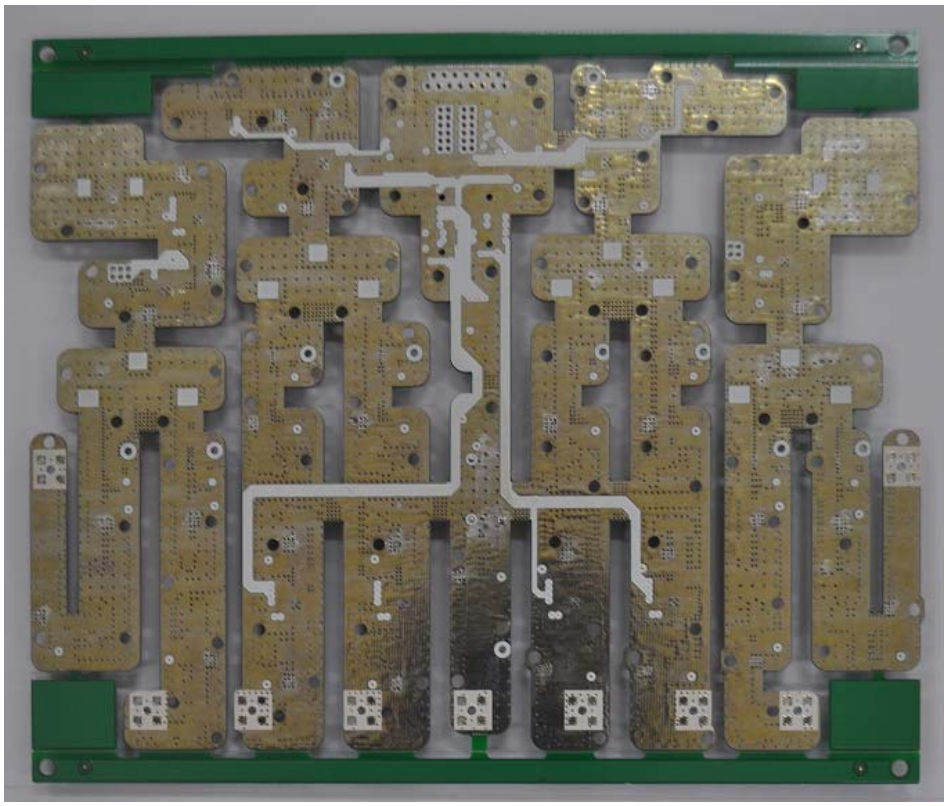
12.21 Vision24 800/900MHz Service Card RF Unit Shielded View



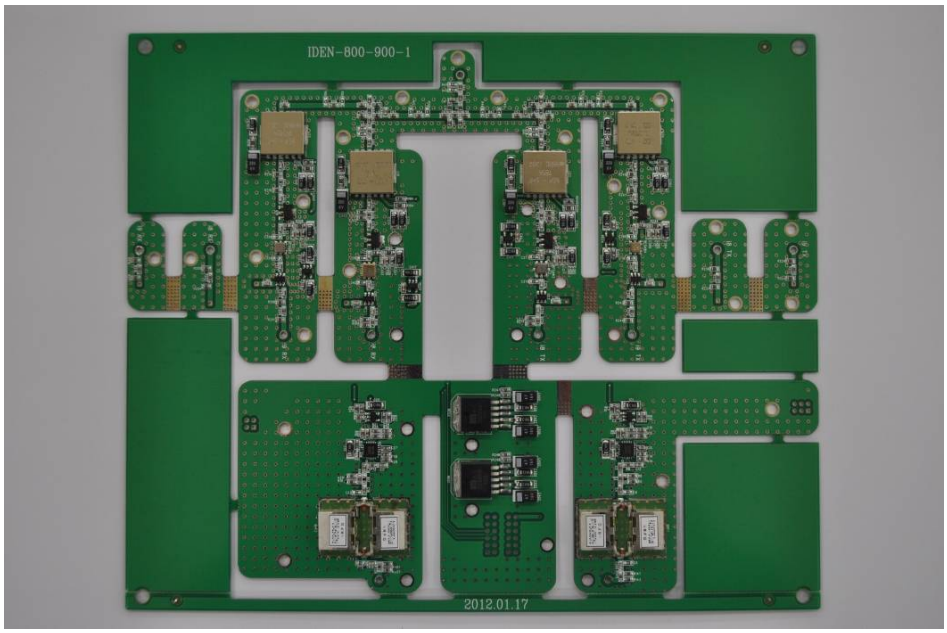
12.22 Vision24 800/900MHz Service Card RF Unit PCB 1 Top View



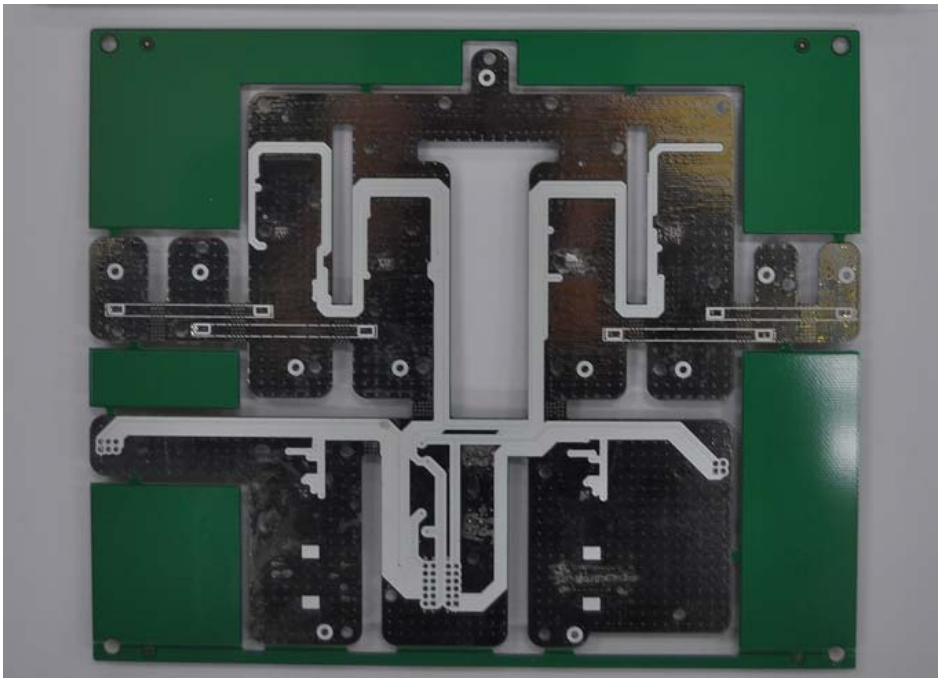
12.23 Vision24 800/900MHz Service Card RF Unit PCB 1 Bottom View



12.24 Vision24 800/900MHz Service Card RF Unit PCB 2 Top View

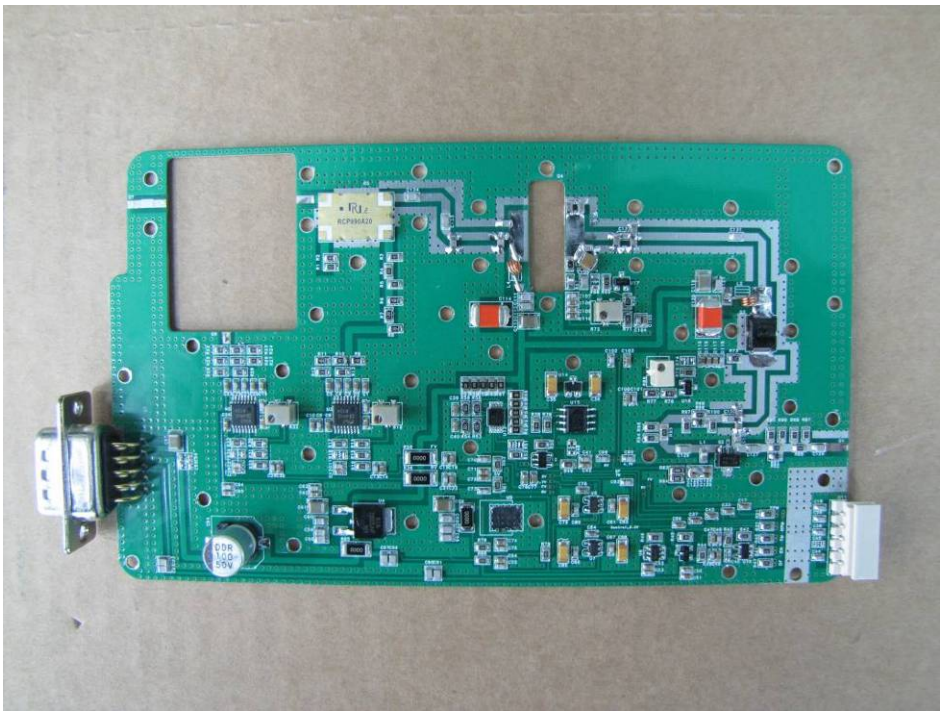


12.25 Vision24 800/900MHz Service Card RF Unit PCB 2 Bottom View

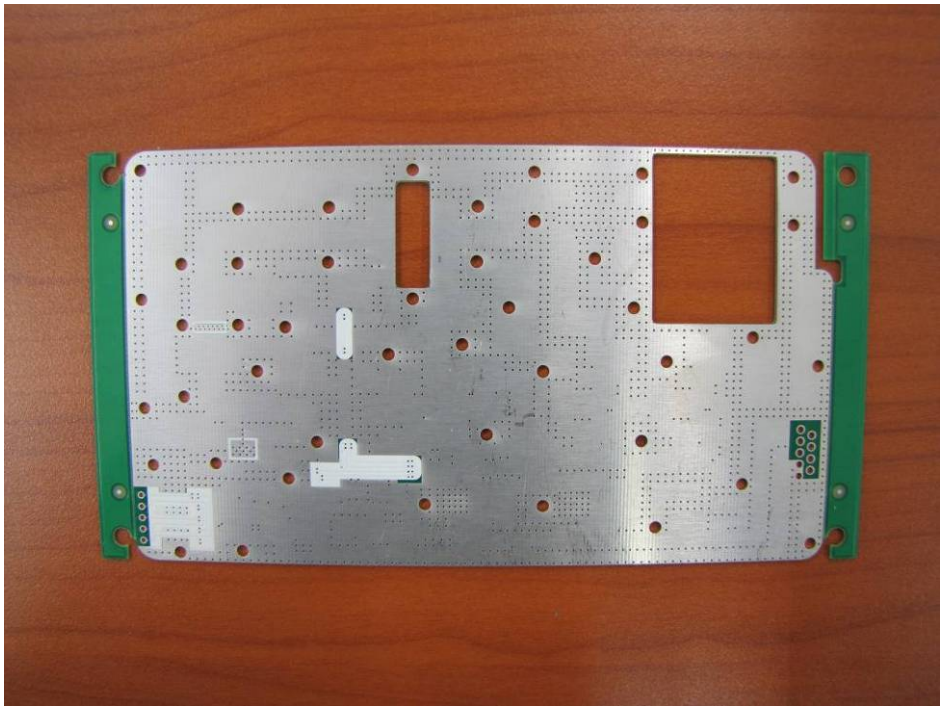


12.26 Vision24 800/900MHz Service Card HPA Shielded View

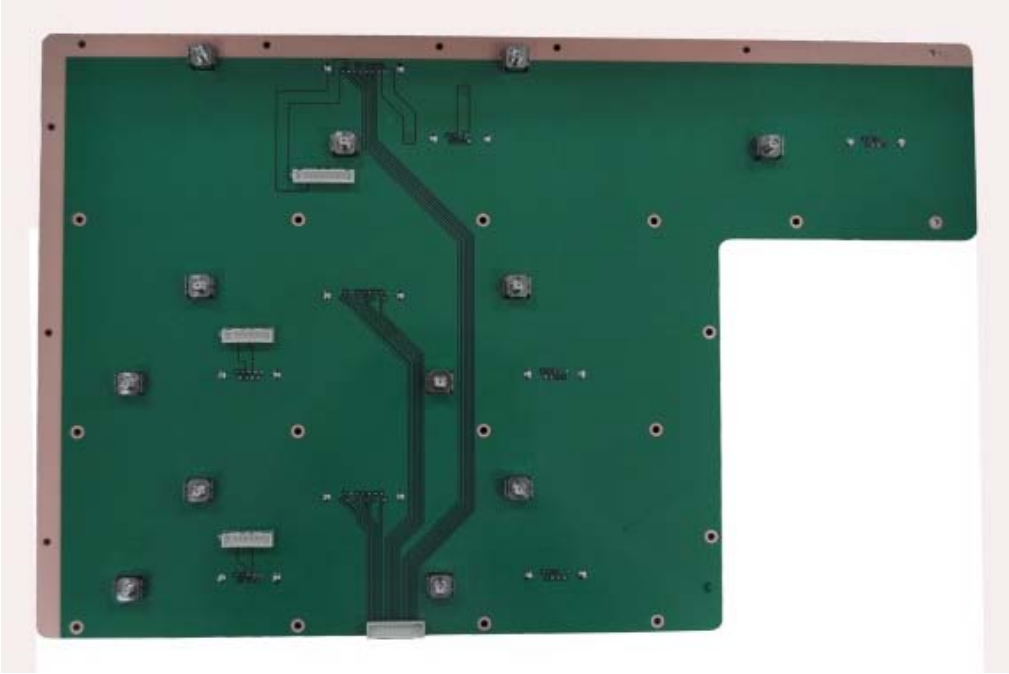
12.27 Vision24 800/900MHz Service Card HPA PCB Top View



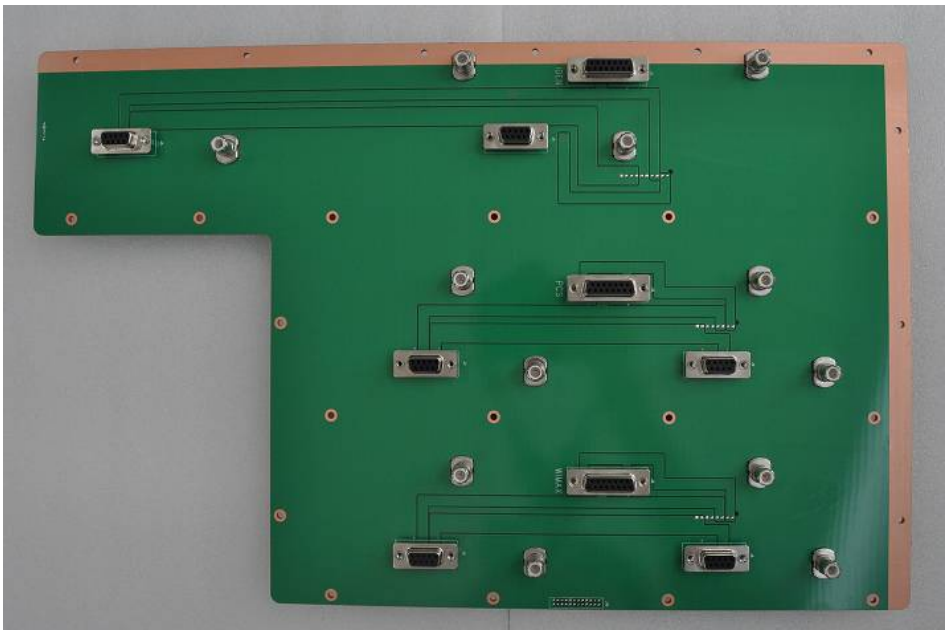
12.28 Vision24 800/900MHz Service Card HPA PCB Bottom View



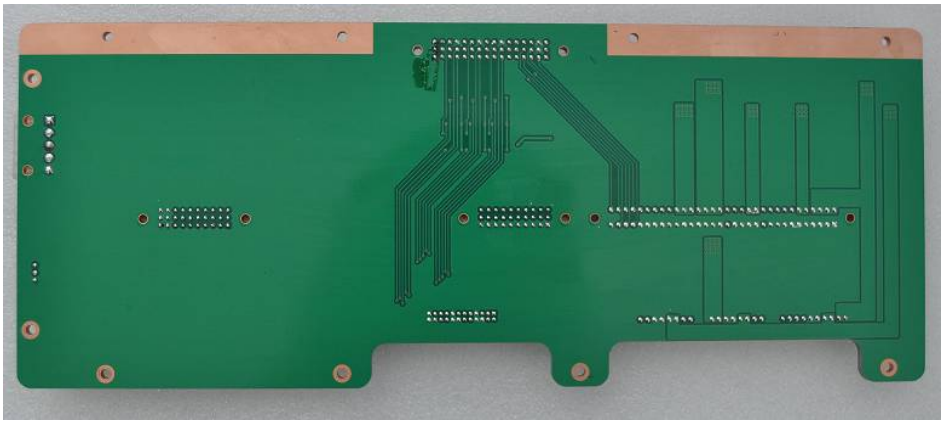
12.29 Main Frame PCB 1 Top View



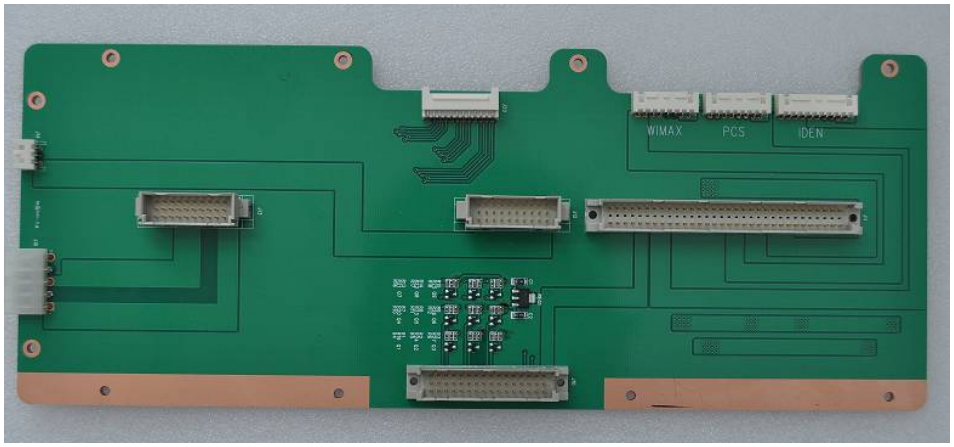
12.30 Main Frame PCB 1 Bottom View



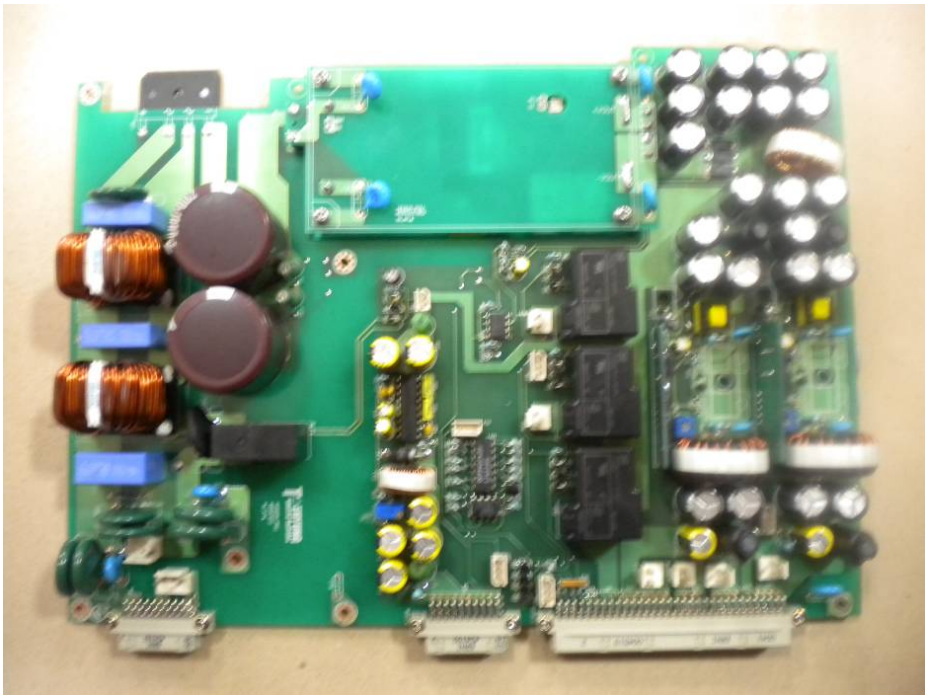
12.31 Main Frame PCB 2 Top View



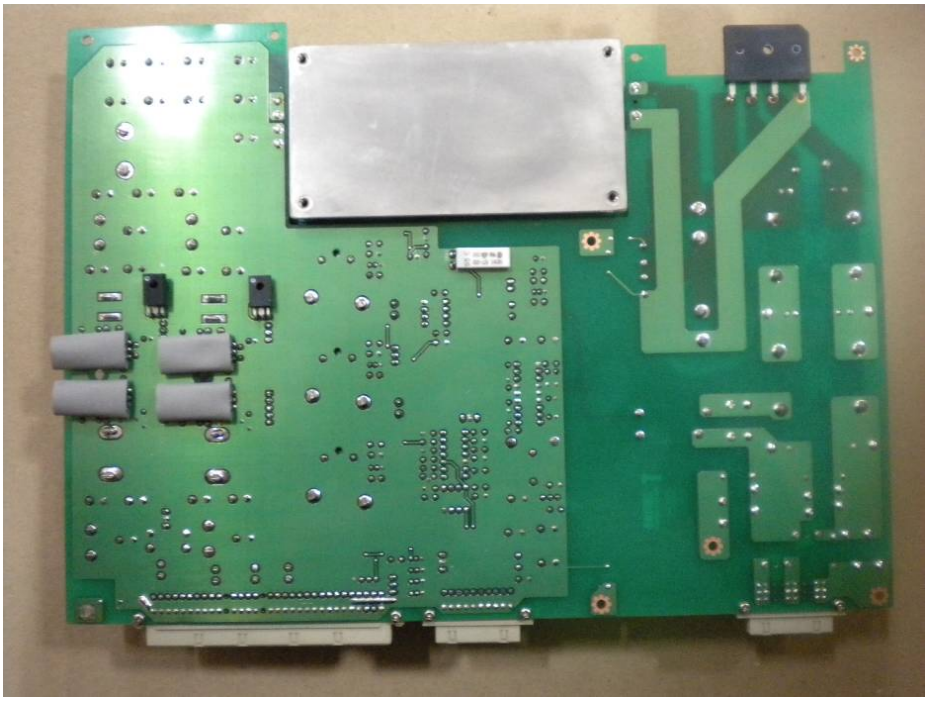
12.32 Main Frame PCB 2 Bottom View



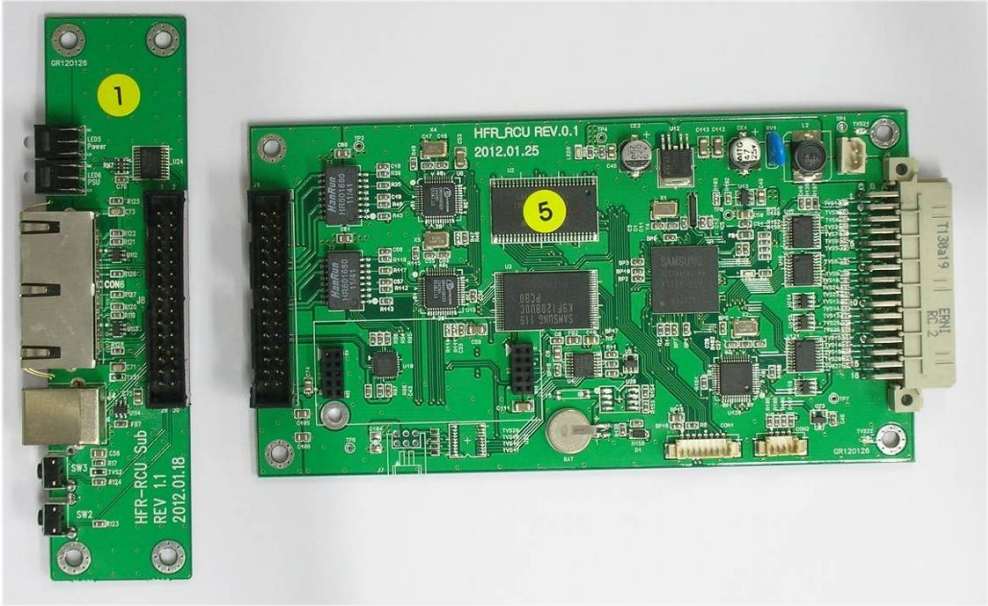
12.33 Vision24 Rectifier PCB Top View



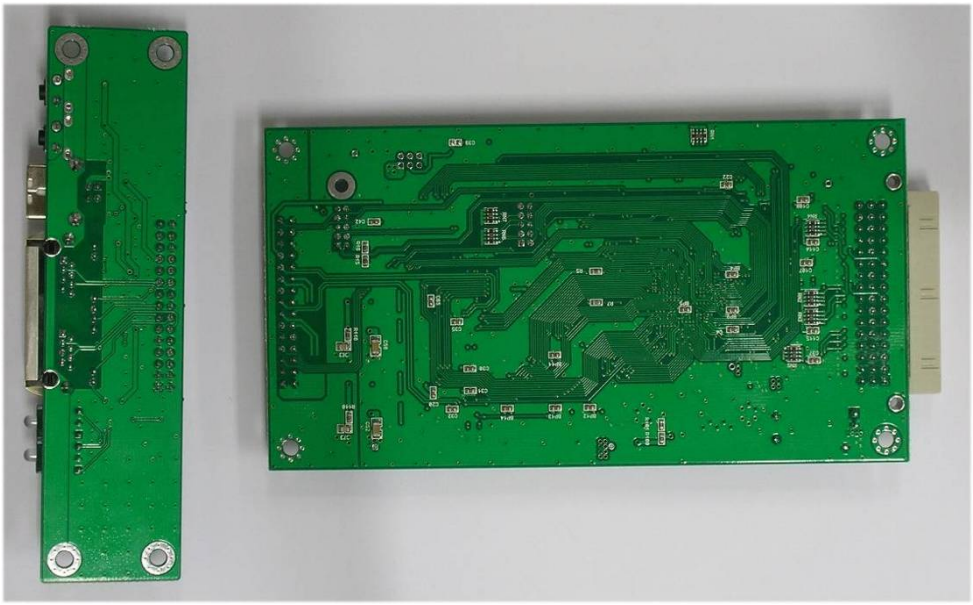
12.34 Vision24 Rectifier PCB Bottom View



12.35 Vision24 Network Controller PCB Top View



12.36 Vision24 Network Controller PCB Bottom View



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